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WILLIAM WRIGHT M.D.

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MEMOIR

OF THE LATE

WILLIAM WRIGHT, M. D.

FELLOW OF THE ROYAL SOCIETIES OF LONDON AND EDINBURGH, ETC.

WITH

EXTRACTS FROM HIS CORRESPONDENCE, AND A SELECTION OF HIS PAPERS ON MEDICAL AND BOTANICAL SUBJECTS.

WILLIAM BLACKWOOD, EDINBURGH; AND
T. CADELL, STRAND, LONDON.

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MEMOIR

OF

DR WILLIAM WRIGHT.

THE mind of the late Dr WRIGHT was frequently occupied, particularly towards the close of his career, with the idea of collecting his scattered papers, on Medical and Botanical subjects, and giving them to the world in a connected form. The present publication had its origin in a desire to carry into effect the purpose which Dr WRIGHT himself did not live to accomplish. It was afterwards thought desirable that the papers should be accompanied with some biographical account of the author; for which it appeared that his extensive correspondence would furnish the necessary materials.

His earliest letters are chiefly addressed to his parents; and, from the ardent expressions of gratitude with which they are chiefly occupied, as well as from the struggles which they discover to share with them his earliest earnings, it may be inferred, that the rank to which he raised himself in society, in letters and in science, was entirely the result of his own genius and industry.

He was born in the month of March 1735, at Crieff, a village of Perthshire, delightfully situated on the first rise of the Grampians, and, until the abolition of heritable jurisdictions in 1747, a place of some importance in this border district, from its having been the seat of the stewartry of Strathearn.

It does not appear to what circumstances his choice of the medical profession is to be ascribed. The fleets and armies of Great Britain presented at this eventful period, a field of enterprize well suited to his disposition and temperament; and the early predilection which he discovered for literary pursuits, would probably determine his preference of a learned profession to that of a mere soldier of fortune. The ill-fated descent of Prince CHARLES EDWARD on the shores of Scotland, and the occupation of the Highland passes in the neighbourhood of Strathearn, by parties of foreign troops, under the Duke of CUMBERLAND, whose head-quarters were for some time at Crieff, in the year 1746, occurring at a period when the mind is so open to permanent impressions, could hardly fail to inspire a young person, more spirited and better educated than his companions, with a passion for participating in the stirring scenes of the period, and a desire to see the world beyond the boundaries of his native valley.

It is an old observation, " that when children play at soldiers, war is at hand ;" but, whether it is to be taken as a sign of the times, or as an indication of his own purpose to make some noise in the world, it appears that our young friend was the *drummer* of his regiment, of which his brother JAMES, about two

years older, was the captain-commandant. It is said, that on one occasion, when the staff of the Royalists was passing the Earn, a salute was fired from some tiny pieces of ordnance, which the lilliputian army had erected on the parapet of the bridge, without much regard, probably, to *political* preference, when the Duke of CUMBERLAND was heard to say to one of his attendants, that, however hostile the adult population had hitherto shewn themselves to the House of Hanover, he regarded this little *feu de joie* as a symptom of their winning the affections of the rising generation.

Having acquired the elementary part of his education at the grammar school of Crieff, young WRIGHT was apprenticed, in his seventeenth year, to Mr GEORGE DENNISTOUN, a surgeon in Falkirk, with whom he remained till the year 1756. No record has been preserved of the nature of his studies during the period of his apprenticeship; but, in a letter of Mr DENNISTOUN to a friend of the family, dated the 31st of July 1756, he speaks of his young friend in terms of strong attachment; commends the earnestness and diligence with which he had prosecuted his studies, and expresses the strongest conviction of his making a figure in the line of his profession.

In the winter of 1756 we find him in Edinburgh, residing in the house of an uncle, attending the medical classes, and admitted to the society of several of the professors in the University, with one of whom, Dr WHYTT, he appears to have lived on habits of intimacy.

It is incidentally mentioned, in the course of the subsequent correspondence, that Mr WRIGHT had made a voyage to Greenland in the summer of 1757; and, in the winter of that year, we find him again engaged, with his wonted ardour, in the acquisition of the knowledge which was necessary for the successful practice of his profession.

At this early period, Mr WRIGHT, in a letter addressed to his parents, on the occasion of his proceeding to London for examination at Surgeons' Hall, discovers some indication of those habits of providence and forethought which marked his after life. The letter is in the nature of a testamentary disposition. It acknowledges the food and raiment with which he had hitherto been provided; the liberal education which had been afforded him, and the acquirement of a profession which was to make him independent of farther assistance, should health and strength be granted. He authorises his father to uplift a legacy which had been bequeathed to him by a deceased relative, and assigns to his parents, and, failing them, to his brother JAMES, his whole means and estate, with any pay which might be due to him at the time of his death. To his brother he writes, on an envelope, that his hopes of obtaining an appointment were not so sanguine as he had led his father to believe, but that he could not think of alarming his parents by the communication of his own feelings of anxiety and suspense.

Another indication of his habits of method and arrangement, and of the strict integrity which uniformly regulated his most indifferent actions, is to be found in

a letter addressed to his father, on the eve of his departure from Edinburgh, in which he enumerates, with scrupulous minuteness, the various periods of his residence in his uncle's family, and combats, with great earnestness, the impression on his father's mind that his uncle would decline any farther remuneration. He quotes an observation which had fallen from his aunt, soon after his going to Edinburgh in 1756; "just as if she had been getting great board wages and 'prentice-fee for him," which he says he had never been able to forget. This, indeed, is the only feeling of bitterness which can be traced through all his early correspondence; "and I am resolved," he says, "if God spare me in life and health, that they shall have it."

He embarked at Leith on board a tender, with a convoy of merchantmen, in company with seven other students of medicine, who were proceeding, like him, to push their way in the world. On their arrival at the mouth of the Thames, they were put ashore on the coast of Essex, and appear to have felt some of those difficulties and extortions which the youthful and inexperienced are so liable to encounter on their first visit to the metropolis. Mr WRIGHT, on parting with his fellow adventurers, proceeded to the house of an elder brother, the son of his father by a former marriage, and appears to have met with a kind and cordial reception. His passage had been tedious and comfortless; and, allowing himself to be infected with the fears of some of his companions, as to the success of their enterprize, he seems to have reached his destination under the influence of a feeling of dejection, which was evidently

foreign to the firm and equal temper of his mind. On his recovery from a fever with which he had been seized immediately on his arrival, he writes to his father and mother;

"Dear Parents,

"Do not cast yourselves down at my present state of health. I hope and trust in God Almighty I shall soon be better. My brother, his wife and child, are well. They are very kind to me, and let me want for nothing. When I write next, I hope it shall be with more courage."

A few days afterwards, the result of his examination is communicated in the following terms:

"Dear Parents, *London, February* 8. 1758.

"I wrote you about a fortnight ago that I had fallen sick. I lay for ten days in a high fever, and every one thought I should not live. The surgeon of the Princess of Wales' armed ship at Leith attended me; he is come hither for a larger ship. I am now, thank God, perfectly recovered.

"I went to Surgeons' Hall with other three who came up in the same tender, to be examined. We waited all in a large outer hall, about thirty in number; some for mateships in the army, some for the navy. About nine at night, I was called in before eight severe looking judges, who sat at a long table in large white wigs. They asked me sternly where I was born and brought up,—how long I had been a 'prentice,—whether I had been at college,—and how I had spent my time since. Having answered these inquiries, 'Well' says the president, 'What are the contents of the thorax?' I gave him every particular but one, and that was the bag or covering of the heart. 'Has not the heart a cover?' said one. I immediately recollected, and told him the name. I was then strict-

ly examined on burns of all degrees, and desired to retire. In five minutes I was called in, and ordered to pay down five shillings. By this time I guessed my fate, and was vexed. It was done, however, and I could not help it. I was desired to attend at the Navy Office at 12 next day, and there I should have my warrant. I went at the time appointed, and was desired to return at six in the evening; but, on coming home here, I was obliged to take to bed, where I lay until the fever left me. On the 4th of this month I went to the Navy Office with one of my companions, who had likewise been ill. We were desired to return on the 6th, at 11 o'clock, and we should then get our warrants. We went. Mine turned out to be second-mate of the Intrepid, 60 gun ship. I shall have fifty shillings a month. To-morrow I set out by the coach to Portsmouth. I hear the fleet will sail on the 13th for North America.

" Dear Parents, I have had the best fortune of any that came up in the tender. I am inclined to think they qualify young men as they have occasion for them; but I have liberty, in six months, to be re-examined for a higher station. Had it not been for my Brother's kindness, my money would by this time have been quite exhausted. I have had above two guineas from him already, and am to have three more to-morrow.

" I went to Lord BREADALBANE's yesternight, and delivered BARCALDINE's letter. He was very kind, and discoursed with me a long time about my Greenland adventure. He has few acquaintances in the Navy; but, when he knows my Captain's name, he will try to get me recommended to him. His Lordship gave me a few franks for letters; he heartily wished me success; and so I left him. I am very much obliged to BARCALDINE for the introduction. If ever I be so fortunate as to be qualified for surgeon, I should not be afraid, if my Lord were in London, but I should soon get my warrant signed.

"I am weary of this famous city already, and thankful I leave it so soon."

This letter is quoted at length, as affording a fair specimen of Mr WRIGHT's early correspondence, and as placing the native simplicity of his character in a point of view which cannot be mistaken. The frankness and condescension of Lord BREADALBANE had cheered his drooping spirits. But the experience he was daily acquiring in the ways of the world, and the confidence he began to repose in his own resources, enabled him, in a short time after this period, to affix a very moderate estimate to the patronage of the great.

In answer to a suggestion of his brother, that he should wait on BARCALDINE, "I could wish," he says, "for an opportunity to thank him for his goodness, but I have no desire to give him any farther trouble in recommending me. I shall endeavour to carry it through myself. If I succeed I shall value it the more, as being free and independent. Had you any idea of the servility and degradation which it is necessary to undergo, and the protestations of gratitude which are expected, you would be of my opinion."

The sickness, anxiety, and embarrassment which attended Mr WRIGHT on his first arrival in London, appear to have destroyed that sense of novelty and enjoyment, on which it is usual for the youthful stranger to place so high a value. The attentions which he received from his brother's family left him only with a keener sense of desolation, while preparing to make his final plunge into the ocean of life. "Oh!"

says he to his brother JAMES, in a letter of the 8th February 1758, " Oh! my Dear Brother, never come to this wicked place, but settle among your own kindred, in your own country, and so you may live happily. Had I been made some mean mechanic, I should not have had occasion to range the world in quest of bread."

Mr WRIGHT was accompanied in his journey to Portsmouth by Mr THOMAS STEEL, a young surgeon, who had been his fellow student at the University of Edinburgh, and with whom he contracted an intimacy, which was only terminated by death. Soon after their arrival, Mr WRIGHT entered himself on the books of the Intrepid; but he and Mr STEEL were obliged, for some time, to reside on shore, until their luggage and bedding should arrive. His first impressions, when he took up his quarters on board, were very unfavourable. The crew he describes as " the refuse of mankind, and the very dregs of the human race," whose dissipation afforded full employment to the medical officers of the ship. The Intrepid he pronounces to be " a plaguy old hulk," the sickliest in the Royal Navy, and in such a state of filth as to engender contagion. The jail fever raged on board, for which no less than seventy of the crew were, at one time, under medical treatment. Mr WRIGHT himself was seized with it, and twice experienced a relapse; but being with three of his brother officers sent on board the Ruby Hospital Ship, in Plymouth Sound, he speedily regained his wonted strength.

The Intrepid was at this time commissioned by

Captain PRATTEN, an officer of some standing in the service, who, with the temporary rank of Commodore, was frequently entrusted, by the Admiral of the Channel Fleet, with the command of a cruizing squadron of five or six ships of the line, and one or two frigates. The surgeon of the Intrepid was PIERCE BUTLER, an Irishman, who is described as "the best of his country, good-natured, and well-bred in the extreme." His first-mate, GEORGE EASON, a native of Dysart, in Fifeshire, had been Mr WRIGHT'S fellow student in Edinburgh.

While engaged in the Channel Service, Mr WRIGHT conducted a regular and very interesting correspondence with his friends in Scotland, and particularly with his brother JAMES; on whom, and afterwards on his family, he appears, through life, to have concentrated the best feelings of a kind and affectionate disposition. The detail which he gives of the mode of living on ship-board, from the cock-pit to the table of the Admiral, is of the most graphic description; and it was no doubt at this period that he began to accumulate that store of professional information to which he was prompted by habits of method and perseverance, and which afterwards enabled him to contribute so largely to the removal from the British Fleet of its greatest scourge, the scurvy.

From the commencement of his career, Dr WRIGHT appears to have kept a regular journal of his practice; and even at this early period, his natural shrewdness and sagacity are strikingly displayed in the reprobation he applies to the prevailing practice in this dis-

temper, and in the enlightened views which he developes of a more natural and rational mode of treating this *ilias malorum*. Thanks to the radical improvement in cleanliness and discipline which has long been observed on board the Fleet, and to that better system of anti-scorbutics, which consists in habits of temperance, in a liberal supply of wholesome viands, and in strict attention to all that is known by regimen and prophylaxis in general, the medical officers of the present generation have triumphantly succeeded in preventing, rather than in curing, the foulest blot in the annals of the navy.

Mr WRIGHT had the good fortune to be present at the great naval engagement off the Isle of Rhé, on the 4th of April 1758, under Sir EDWARD HAWKE. He shared in the prize-money of the Raisonnable 64, commanded by Prince MEININGEN, which was captured by Commodore PRATTEN, on the 26th of April in the same year; and on the 16th of August 1759, he witnessed the great victory which Admiral BOSCAWEN achieved off Cape Lagos over the French Fleet under DE LA CLUE. His untravelled correspondents would no doubt read, with wonder, the account he gives of the Turks and Egyptians, the Armenians and the Jews, with the peculiarities he observed in their habits and costume. Of the classic shores of the Mediterranean he speaks with enthusiasm; and with the deepest awe and veneration, when he alludes to those places where the authors of the sacred volume were visited with the language of inspiration.

On the return of the Intrepid to Portsmouth to re-

fit after BOSCAWEN's victory, Mr WRIGHT, with the concurrence of his commanding officer, and with the friendly assistance of Mr BUTLER, the surgeon, and his first mate Mr EASON, proceeded to London, and offered himself for re-examination, with a view to his advancement in the service. When in London, on this occasion, he resided with the family of Mr BUTLER, of whom he uniformly speaks in terms of regard and attachment, which are equally creditable to both. He succeeded in his mission, was rated first mate at Surgeons' Hall, and returned to Portsmouth with his warrant, which proved to be for the Danaë, Captain Sir HENRY MARTIN, a 40 gun frigate, the finest, as he describes her, at that time in the service. The letter announcing his promotion, is written with great feeling and moderation: "But, dear Brother," he concludes, "I shall soon surmount all my difficulties; and assure yourself, that my first wish is to make you all comfortable."

He had already, when only second mate of the Intrepid, at fifty shillings a month, made two remittances to his father: The one consisted of savings from his little pittance of pay, the other of the prize-money he had received when at Gibraltar.

His first cruize in the Danaë was directed to the north of Scotland; and, soon afterwards, we find a letter dated from Leith Roads, on the 8th of December 1759, in which he anticipates the pleasure of surprizing his uncle's family with a visit, under better auspices than when he last parted from them. The signal victory which HAWKE had lately achieved over

the Brest fleet, appears to have induced the belief that a general peace was at hand; and accordingly he consults his brother as to the course which it would be proper for him to pursue, on the supposition of his being turned adrift from the service. The homeward views which he had begun to entertain are, however, soon directed to other objects. M. THOROT, and a French squadron, having made a descent on the Western Islands, the Danaë was directed to join in the pursuit. Having at length succeeded in clearing the coast of the privateers with which it was infested, the Danaë and her consorts lay for some time at Loch Swilly, on the Irish coast; and Mr WRIGHT speaks in the warmest terms of the hospitality of the inhabitants, and of the introductions which he obtained to the best society of the neighbourhood, through the favour of his superior officers. "Colonel VAUGHAN," he writes to his brother, "keeps quite an open table, and condescends to express his disappointment if any of the officers of the expedition are known, when ashore at Loch Swilly, to dine elsewhere than at his hospitable board."

Towards the end of the year 1760, the Danaë received an order, while stationed at Cork, which, unconsciously to Mr WRIGHT, imparted a colour to his future fate. She was appointed to form part of a considerable armament, which was to assemble at the Cove, with orders to proceed to the Antilles, for the protection of our West India possessions, and the reduction of Martinique. From Cork he writes to his brother, on the 15th of December 1760:

"We arrived in Plymouth on the 20th of October,

when the ship was put into dock. During that time I was not idle. Among other things, I made application, at the proper quarter, for recovery of the last ten guineas which I had directed to be sent to my father; and the ship having sailed from Plymouth before the matter was adjusted, I have appointed Mr OLIVER TOULMAIN to act for me in my absence. If it should please GOD to call me hence, he is empowered to receive all my wages and prize money; and, as he is a very honest man, he will give you a faithful account.

"We only arrived here this morning, having left Plymouth on the 4th of the month; and we are to remain in this harbour till the convoy is ready for sea. If GOD spare me to come home again, I have the promise of being made a surgeon directly."

Some time after the date of this letter, the armament under the command of the gallant RODNEY, proceeded on its destination. The strong redoubts of Port Royal were obstinately defended by the French garrison, who thus provided a long arrear of arduous duty for the surgical department; but the ultimate success of the expedition was satisfactory and complete.

It was here that Mr WRIGHT became acquainted with Dr SAUNDERS, Dr GEORGE MONRO, and Dr GARTHSHORE; with the last of whom he contracted an intimacy, which eventually ripened into the warmest and most lasting friendship. The fall of Martinique was immediately followed by that of Grenada, St Vincents, and St Lucia; and Mr WRIGHT having been successively transferred from the Danaë to the hospitals on shore, at Fort Royal and St Pierre, and

from thence to the Culloden 74, and the Levant Frigate, he was constantly engaged in a great variety of practice in both departments of his profession. In the course of the visits which he had an opportunity of paying to the various islands of the Archipelago, he enjoyed the best opportunities for observing the nature and symptoms of tropical diseases; and those particularly to which the European is peculiarly subject on his first exposure to the influence of the climate.

He had also, while thus moved about from one station to another, some prospects of promotion, which, however, were not realized until the conclusion of the Seven Years' War.

From St Christophers, he writes on the 25th of July 1761: "I have been recommended to Commodore Sir JAMES DOUGLAS, and have come on board the Culloden to wait for preferment, which I hope will be soon." In a subsequent letter from on board the Levant, at Antigua, he says, "My friend Sir JAMES DOUGLAS has been suddenly despatched to the succour of Jamaica; and I should have gone with him as first mate in the Dublin, had not this frigate been unfortunately out of the way; so that my hopes of promotion are for the present at an end."

The coloured population of the islands are described by Mr WRIGHT as a "spindle-shanked," attenuated, race, differing in all respects, both moral and physical, from their British forefathers. The Negroes, on the contrary, are said to be healthy and robust; "but no one," he observes with truth and feeling, "endowed with the common attributes of humanity, can witness

their sufferings, and reflect on their hard fate, without pity for misfortunes which end but with their lives."

It appears, however, that, in after life, his sentiments on the subject of Negro slavery had suffered a material change; and it is due to his memory to state, that, in common with the great majority of those who have long resided in our West India settlements, Dr WRIGHT retained these altered opinions after his final return to Great Britain, and indeed long after he had ceased to have any personal interest in the affairs of the colonies.

In the year 1792, he was called upon to give his evidence on the subject of the abolition of the slave trade before a Committee of the House of Commons. Among his papers a memorandum has been found containing an answer to the following question: "How comes it about that slave Negroes are able to labour in the heat of the sun, which you allege so fatal to Europeans?" Dr WRIGHT'S answer was as follows:— "From many conversations I have had with sensible Guinea Negroes, I think they change their climate and condition for the better. They described their country to be hot, sultry, and in many places unhealthy; their habitations as temporary and miserable, infested by noxious animals, and surrounded by hostile nations, so that their lives and properties are perpetually in danger. They are brought to a fine healthy island, where, in a little time, they find themselves quite at home, in safety and under protection. The Negro is supplied with every necessary of life, both in food and clothing. He has a good house, and proper utensils. When at

length he is put to work, it is proportioned to his strength. The heat of the sun is so far from being hurtful, he takes delight in it. This, too, is precisely the case with his descendants."

In another place, he compares the comforts and advantages enjoyed by his own immediate domestics, in a situation where all the misery of bondage was mitigated and softened down, with the privations of food and clothing, which are too often suffered by the labouring poor of his native land; and, again, by still stronger contrast, he refers to the savage habits of the naked African in a state of nature, many of whom he describes as having seen, with their teeth mechanically sharpened, the better to enjoy, according to their own confession, an inhuman banquet on the bodies of their captive foes.

It is impossible to doubt the fact, that the situation of the individuals who had providentially been rescued from such a state of barbarism, and placed under the guardianship of a man, whose heart overflowed with the milk of human kindness, was immeasurably improved. But, on a subject where reason is all on one side, it is impossible to argue. In his original reprobation of the practice of slavery, as well as in subsequently yielding to the prevailing habit of the country, Dr WRIGHT was equally guided by the influence of good and honourable feelings, and permitted them to supply the place of arguments, which, to a mind like his, must, under any other circumstances, have all arranged themselves in opposition to slavery in its most mitigated form.

At the conclusion of the Seven Years' War, in 1763, Mr WRIGHT returned to Britain in the Levant frigate, which was paid off on her arrival at Sheerness, in the September of that year. Mr WRIGHT appears by this time to have adopted the resolution of returning to the Antilles, and applying himself to the practice of physic in the island of Jamaica: "Being wearied," he says, "of wandering, I would fain settle ashore, but I fear it must be abroad, as our own country is full of my profession." With this view he repaired to London, and applied himself, with his wonted assiduity, to those studies which the proposed change of circumstances had in some degree rendered necessary.

Although the general pacification which resulted from the treaty of Paris, precluded all hope of obtaining any farther employment in the public service, Mr WRIGHT, with that stedfastness of purpose for which his character was distinguished, immediately on his arrival in London presented himself once more at Surgeons' Hall for examination; when he obtained the barren qualification of surgeon to a man-of-war, of the third rate, which ranges from 64 to 80 guns. His motives for making this application are described in a letter to his brother, to have been the satisfaction of his friends in Scotland, and the self-assurance that he merited the advancement which he had hitherto been unable to command. He laments the necessity which compels him, from prudential considerations, to prepare once more to cross the Atlantic, without being able to see his aged parents, and with no definite pros-

pect of a speedy return. "Nothing," he says, "could give me more pleasure than to see you, nor greater grief than again to part." The time he would thus have spent he devotes to his professional improvement;—the money, he remits to his father, to purchase those additional comforts which were suitable to his advancement in years. In a subsequent letter, he acknowledges the obligation which he owes to his brother for his acquiescence in the measure, and for the kind interest which he took in reconciling their parents to so severe a trial of their patience. "The only consideration which alleviates my grief," he adds, "is the tender care and concern you have ever shewn them. May GOD reward you for it, and enable me to shew you my gratitude."

It was at this period that Mr WRIGHT obtained the degree of Doctor of Medicine, through the instrumentality of a gentleman who had served with him as a surgeon in the navy, and whose father, Dr SIMSON, at that time occupied a professor's chair in the University of St Andrew's, in which he was afterwards succeeded by his son, the early friend of Mr WRIGHT.

Of the five or six years which Dr WRIGHT had spent in the navy, he uniformly speaks as a series of misfortunes; but wisely comforts himself with the reflection, that the slowness of his advancement had operated as a spur to his exertions, and prompted him to improve himself by study, while others were wasting their time in idleness and dissipation. Of this he had a striking instance when he first went on board the Levant, where the surgeon, a man of talent and

education, and many amiable qualities, had totally incapacitated himself for the duties of his station by habitual intemperance. The labour and responsibility which thus devolved on Dr WRIGHT, without any adequate remuneration, in place of relaxing his efforts or disturbing his equanimity, only tended, as we have seen, to confirm those habits of activity and application, which were the natural bent of his well constituted mind.

The last surgeon with whom he served in the Levant was Mr WILLIAM COLLART, a native of Dumfries, who is described as a very good man, and an expert surgeon. In him Dr WRIGHT found a disposition and habits congenial with his own; and, but for the disturbances which soon afterwards broke out in North America, he had it in contemplation to accede to a proposal which was made to him by Mr COLLART, of establishing a partnership in one of the British colonies on that continent. The two friends resided together during Dr WRIGHT's stay in London, and, on his departure for Jamaica, he received a present from Mr COLLART of a valuable medicine chest, and an assortment of surgical instruments.

In the intimate, uninterrupted, and confidential correspondence which Dr WRIGHT maintained with his brother from the earliest period, there is, strange to say, not the slightest trace of his having ever been under the influence of the tender passion. He had always, indeed, a keen relish for a good-natured joke, and was as ready to receive, as to return, a little well-

meant raillery, on a subject to which a bachelor of twenty-eight is peculiarly subject. His uncle, for instance, who had been for some time a widower, inquiring, in a letter addressed to him while in London, whether his views have yet been directed to the subject of matrimony, and when he may hope to congratulate him on being the Benedict, "Surely, my dear Uncle," is Dr WRIGHT's reply, "you imagine that I measure my corn by your bushel. Make my compliments to your intended, and say how my cousin JEAN enjoys the prospect of her new Mamma!" On another occasion, he writes to his brother, "Well, then, since all my old sweethearts have forsaken me, what say you to my attacking some rich widow, and making my fortune by a *coup de main*?"

Having completed his preparations in London, and almost exhausted his little store in the expences of his outfit, Dr WRIGHT sailed from the Downs on the 15th of December 1764, on board the Bonella, commanded by his friend Captain DUTHIE, who, with the assistance of his lady passengers, enabled the little party to spend a three months' passage with mutual satisfaction. The Bonella remained fourteen days at Madeira, where Dr WRIGHT was well received in the best society of the place; and, in a letter to his brother, communicates a great deal of interesting information as to the manners of the inhabitants, and the natural history of the island; but the necessity for quoting it is in a great measure superseded by the more recent researches of other travellers.

Dr WRIGHT was provided with letters of introduc-

tion from Sir HENRY MARTIN, and other friends in London, to some of the leading inhabitants at Kingston; but, on his arrival there in March 1764, he found to his mortification, that the supply of medical practitioners in Jamaica, was, from the same causes which left him unprovided, quite as much above the level of the demand, as he had found it in Great Britain; insomuch, that individuals whom he had known acting as surgeons in the navy, he found serving under indentures at the rate of £ 40 a-year. This in particular he found to be the case, in the parish of Savanna le Mar, where he had proposed to settle, so that, on his return to Kingston, after a tour through the island, he was induced to accept a proposal, which his respectable introductions had procured for him, from the principal practitioner of the place, Dr GRAY, to engage as his assistant. The term was limited to six months, and the emoluments were at the rate of £ 100 per annum, with the addition of board and lodging, which he describes as equal to so much more, from the extravagant habits of the place, and the period, in the article of dress.

This, however, was only a temporary expedient. He never abandoned his purpose of engaging independently in practice; and while he was yet hesitating what course to pursue, he received a very welcome letter from his old friend Dr STEEL, announcing that his business had become greater than he could manage, and proposing, by means of a partnership, to share his good fortune with Dr WRIGHT. The offer was of

course very readily embraced, and the partnership commenced on the 1st of November 1764.

Dr STEEL's residence was at Hampden Estate, about 150 miles from Kingston, at that time situated in the parish of St James's, but afterwards, by subdivision, in the parish of Trelawny, so called in honour of Sir WILLIAM TRELAWNY, the Governor. Hampden was the property of Mr JAMES STIRLING, and was at that time under the management of the late PATRICK STIRLING of Kippendavie. The Negroes under the medical charge of the two partners amounted to 1200, which, at 5s. each per annum, produced a considerable item of ascertained revenue. To this was added a respectable medical practice among the free population, within a circuit of ten or twelve miles. Dr STEEL and Dr WRIGHT resided together, in a snug little dwelling, about a mile distant from the mansion-house of Hampden. Around their residence they had an inclosure of twenty acres, which served as pasture for their horses. The whole was situated in a valley of considerable extent, surrounded by hills of great elevation. The climate is described as perfectly salubrious, and constantly refreshed by alternate breezes from sea and shore.

The profits of the partnership appear to have been considerable, as, in six months after its commencement, they had expended upwards of £ 500 in household furniture, and in the purchase of seven horses and four Negroes: A short time afterwards they acquired 107 acres of land, part of the estate of Hampden, for which they paid £ 321. Their object in

making this purchase arose from an apprehension that the estate might pass into other hands; by which they might not only lose the medical charge of the Negroes, but be driven from the most lucrative portion of their practice, among the free population of the neighbourhood,—a feeling which Mr STIRLING, the superintendant, in his anxiety to serve his two medical friends, suggested, and obtained this mode of removing. These efforts were not made, however, without involving them in some temporary embarrassment; but Dr WRIGHT, in a letter dated in September 1766, speaks with some confidence of being able, in another year, to extricate themselves out of all their perplexities. "Our business," he adds, "continues to prosper, and, as my friend STEEL and I are both of us healthy, obliging and diligent, we hope to retain, at least, if we do not extend, the practice we have already acquired, notwithstanding the numerous competitors who settle in our neighbourhood. Having already discovered something of consequence in the way of our profession, we are not without hopes that hereafter we may be better known in the world."

In July 1767, it appears that their Negroes amounted to fifteen in number. Some of them were employed in clearing their little plantation. The labour of others was let out to hire; and this last he describes as the only possible mode of making a fortune speedily, the annual profit being equal to 50 per cent. on the value of the slave. In the mean time, Dr WRIGHT is never forgetful of his friends at home. With the family of his brother in particular, there

seems to have been a constant interchange of mutual good offices. His sister-in-law had been a school-companion of his own, but her marriage had not taken place until after he had left the country. In his early letters, however, he had probably anticipated the connection, as he seems desirous, on all occasions, of introducing some allusion to his favourite EFFY MACVEAN, whom he describes as equally distinguished for good sense and beauty, and for perfect good temper, an every-day quality perhaps more valuable than either. While his parents yet survived, their comfort and happiness was the pivot on which all his homeward views were turned. For some time after his settlement at Hampden, he was unable to make pecuniary remittances, but when he sent home a consignment of cotton, to exercise his sister's industry, or a puncheon of rum for his brother's table, it was always accompanied with some grateful acknowledgment to the daughter-in-law, for her attention to his parents, and with the most ardent commendation of the filial piety of his brother.

The fears of the two partners lest they should lose the valuable business of Hampden estate, on a sale of the property, were happily disappointed. Their separate practice proceeded prosperously, and progressively increased; and, in November 1768, their success is described as beyond their expectation. It was in the midst of this scene of activity that Dr WRIGHT received an application from the University of Edinburgh, which appears to have given a fresh impulse at least, if not a new direction, to his literary and scien-

tific pursuits. A resolution had been recently adopted by that University, for the establishment of a Museum of Natural History; and the invitation which was offered to Dr WRIGHT, through the medium of Dr RAMSAY, the Regius Professor of the science, to become a contributor to the collection, was accepted with as much alacrity as it was afterwards prosecuted with perseverance and effect. His earliest contributions were chiefly confined to the departments of Ornithology and Entomology, in which the stores of the Museum have since become so copious and so rich. In the preparation of his specimens, and in those instances, especially, where any preservative process was required, Dr WRIGHT had a singular neatness of method and manipulation, which added greatly to their value. They were uniformly accompanied with a *catalogue raisonnée;* and whenever objects of novelty or curiosity occurred, a separate historical memoir was added: but it is matter of regret, that the facts which were thus accumulated, and the valuable correspondence which was for many years maintained between Dr WRIGHT, while resident in Jamaica, and Dr JOHN HOPE and Dr RAMSAY, the Professors of Botany and Natural History in the University of Edinburgh, should be for ever lost to science and the world.

But Dr WRIGHT never permitted the avocations of science to interfere with the exact performance of his professional duties. The leading characteristic of his medical practice appears to have had its origin in a close and discriminating attention to the operations of nature, in opposition to the visionary views of in-

experienced theorists. In the months of April, May, and June of 1768, the district of Trelawney and St James's, and the neighbouring country, was severely affected with an epidemic smallpox, which proved fatal to many who were seized with it in the natural way. It appears to have been a custom among the Maroons of Jamaica, as well as in some of the nations on the coast of Guinea, to cover the body with wet clay during the eruptive stage of the disease. Combining this practice with the cool mode of treatment recommended by SYDENHAM, and successfully pursued by SUTTON and Baron DIMSDALE, and with his own observation of the relief experienced by the patient, on exposure to the open air, Dr WRIGHT was induced to prescribe the cold-bath in cases of variolous fever, whether proceeding from inoculation, or taken naturally. The cold water was applied by aspersion or affusion every four or six hours. By this treatment the febrile symptoms speedily assumed a milder form. An agreeable glow was succeeded by a gentle perspiration, and the eruption was generally favourable *.

The happy results of the great discovery of Dr JENNER, in staying the progress of smallpox, and the prospect which it affords of at last effecting the total annihilation of this scourge to the human race, has deprived the success of Dr WRIGHT'S experiment of much of its interest. But it is worthy of being recorded, as presenting the first link of that chain of

* Edinburgh Medical and Surgical Journal, iv. 123.

circumstances which led to the external application of water, as a remedy in fever and other diseases.

Neither, however, did the laborious and exhausting duties of his profession, nor his undiminished zeal for the interests of science, engross so much of Dr WRIGHT'S attention as to make him unmindful of those dearer ties which connected him with home. In a letter to his brother, dated in July 1769, Dr WRIGHT says, "I am fighting hard for a little independence, and hope in a few years, with God's blessing, to secure it. I have already set bounds to my ambition: When I arrive at that, I shall quietly get home, and spend the remainder of my days with you in my native land. It gives me the greatest satisfaction to observe, that the harmony and good understanding between you and our parents, too seldom seen in families, should continue to subsist in so eminent a degree. The supplies which my sister is kindly preparing for me will be very acceptable. I beg that, in the mean time, she may continue to think well of me, and give me a place in her affection and esteem."

In the month of March 1770 Dr WRIGHT was seized with one of those intermittent fevers which, in warm climates, are so peculiarly dangerous. He had caught the infection from a patient; but the temperance of his habits, and the natural soundness of his constitution, joined to the assiduity and attention of his partner, and his own medical skill, enabled him, in a short time, to conquer the disease. In the following June he says, "Our practice continues as usual,

and my health is quite re-established. However Tom and I are heartily sick of this way of life, and long for the time when we can leave it with a good grace, that is, when we can do without it."

Having erected a house on their plantation, and named it Orangehill, the two partners went to reside there in the year 1771. By this time their slaves amounted to thirty-three, so that it became necessary to engage a white man to superintend them.

In this year, also, he began his magnificent collection of dried plants, arranged and described according to the system of Linnæus. A copy of the third edition of the Species Plantarum, printed in 1764, is now in the possession of Dr Thomson of Glasgow, in which all those species are marked, amounting in number to 761, which had been examined and verified by Dr Wright during his residence in Jamaica. The popular names, by which they were known in the island, are generally added, and reference is made to those elaborate productions of Browne and Sloane, to which the natural history of Jamaica is so much indebted, in every case where the great Swedish naturalist himself had omitted to do so. A point of interrogation has been placed against a number of additional species, to indicate probably that Dr Wright had not fully satisfied himself of their identity with the specimens which had fallen under his observation. These particulars are recorded as affording some indication of the progress which Dr Wright was making in this fascinating study, and of the origin of that splendid herbarium which he had accumulated during his residence

in those regions, where the climate and the soil are equally favourable to the productions of the vegetable kingdom, and where nature appears to have exhausted her efforts in the gay profusion of her gifts. But the enquiring mind of Dr WRIGHT was not to be limited to the mere purposes of classification and arrangement in his botanical pursuits. The practice of medicine was not in his hands a matter of dull and ordinary routine. His attention was constantly applied to its advancement as a science, and while he discovered an extraordinary diligence in procuring the results of the latest observation, from all the quarters of the world of letters, he was indefatigable in availing himself of the peculiar advantages which he enjoyed in making his researches in the school of Nature.

The valuable information which Dr WRIGHT was so industrious in acquiring, he was equally ready to communicate. He was visited by every scientific traveller who made the natural history of the British West Indies the subject of his study. To such visitors the ordinary offices of hospitality formed a small part of the obligation which they had reason to acknowledge. With a liberality for which collectors are not universally remarkable, his own stores were always open to the inspection of the curious, and his duplicates were readily bestowed on such as could appreciate their value. The *habitats* of the rarer objects of pursuit were carefully pointed out; and when the time or the limits were exhausted within which his own personal attentions could be conveniently devoted to the accommodation of his visitors, he provided them

with letters of introduction to such friends as would be able to promote their views. He had opened a correspondence, in both hemispheres, with men of eminence in his own profession, as well as in general science, and had placed himself in communication not only with many of the learned societies in Great Britain, but with some of those infant establishments on the continent of North America, which are destined, in future ages, to give a new lustre to the parent stock by an honourable rivalry. The extent of his living contributions to the Royal Gardens at Kew, and of his liberal additions to the dried collection of Sir JOSEPH BANKS, are matters of historical interest. His personal friends* were supplied with equal liberality, and by their means, not less than by his genius and application, his name, as a naturalist, became favourably known wherever the science of nature was encouraged.

The simplicity as well as efficacy of the remedies

* It is in acknowledgment of obligations of this kind, as well as in compliment to the great attainments of Dr WRIGHT in the same paths of science with himself, that Dr STOKES of Chesterfield has dedicated to him his learned and elaborate work, entitled the Botanical Materia Medica, in four volumes 8vo. Dr STOKES avails himself of the public opportunity afforded by the dedication, to call upon Dr WRIGHT to resume his pen, and communicate to the world all that he had observed in the plants and diseases of the West Indies. This eminent botanist speaks of the Herbarium of Dr WRIGHT, which he had seen at Edinburgh, as one of the most complete collections which had ever fallen under his observation. Dr STOKES is understood to be still a survivor of Dr WRIGHT; and affords another instance of the efficacy of botanical pursuits in promoting longevity.

employed by Dr WRIGHT, are strikingly illustrated by the following memorandum: "In 1772," he says, "I was sent for to see a person ill of a fever, at a considerable distance from Orangehill. His name was WILLIAM JEWEL, aged about thirty years, and by trade a cooper. He had caught the fever by exposure to the heat of the sun; and it was attended with the usual symptoms of remittents. He had been attended by a person of no experience, who had already administered several drastic vomits and purges.

"I found him in a hot room, with all the doors and windows shut, stewing with warm drinks under a load of bed-cloaths. His headach was great—his thirst intolerable—his skin burning hot; nor were the symptoms abated by the partial sweats produced by the warm drinks, the bed-cloaths, and the surrounding curtains. My first object was to cool the atmosphere in which he breathed. I drew aside the curtains, and caused the blankets to be gradually removed. The door was opened, and the Venetian lattice of the window was let down, so as to admit a free circulation of the external air, without permitting it to blow in the direction of the bed The poor man was greatly relieved. 'Will you,' he said, 'indulge me with a cup of cold water?' 'Most certainly,' I replied, and handed him a half pint tumbler. He drank it hastily, with a thousand thanks, and was much refreshed. After ten minutes he begged for another, which was also granted. In a short while he exclaimed, 'You have saved my life, I am cool and comfortable!' The skin was now restored to its natural heat, a kindly

perspiration succeeded, and my patient was inclined to sleep. Next morning he was perfectly free of all complaint, and recovered without the use of any other medicine."

In the year 1774 Sir WILLIAM TRELAWNEY was succeeded in the government of Jamaica by Sir BASIL KEITH, in whom Dr WRIGHT had the satisfaction to find a man of congenial sentiments, who could appreciate the value of his labours in the pursuit of knowledge. For his first introduction to the new governor, Dr WRIGHT was indebted to the late Dr HOPE of Edinburgh; but soon after Sir BASIL's arrival in the island, on the occasion of his tour of inspection of the territory of his government, Dr WRIGHT had the pleasure of making his personal acquaintance. He paid his respects to the governor at all those points of the journey which were consistent with his professional avocations, and he speaks of the entertainments which were prepared, on this occasion, by the principal inhabitants, for the reception of the cortege, as placing the luxury and splendour of the western world in competition with the extravagance of oriental pageantry.

In the month of September 1774, Dr WRIGHT received the appointment of surgeon-general of Jamaica, an office of honour and distinction, but not connected with any direct emolument or revenue, and important only as it indicates the station to which Dr WRIGHT had been able to raise himself by his own unassisted efforts, and as it marks the esteem in which he was

held by the respectable and gallant officer to whom the government of the island had been entrusted.

It was in 1775 that Dr WRIGHT made known the Cinchona Jamaicensis, a species of the Jesuit Bark tree which he discovered in the island, and of which a full description was afterwards published on his return to Great Britain. The inner bark of this species he recommends as equally efficacious in medicine with that which was formerly known to apothecaries, but like it as losing some of its valuable qualities by the necessary process of desiccation.

It was in this year also, that Dr WRIGHT first appeared before the world as an author. A medical paper of his was read before the Philosophical Society of Philadelphia, and published in the second volume of their Transactions. In this paper a medicine is recommended which is well deserving the attention of the professors of the healing art at the present day. It respects the treatment of diabetes, a disease which continues to baffle the skill of the most eminent physicians. Some have attempted to cure it by restricting the patient from vegetable aliment, and confining him to the use of animal food and a stimulating regimen; some by the copious exhibition of opium; some by blood-letting; and some by the use of emetics administered in such doses as to occasion nausea. Dr WRIGHT's remedy consisted of lime-juice, saturated with sea-salt; and in addition to the more direct and satisfactory evidence which his own experience afforded, it is right to notice the theoretical advantages which are claimed for it by one of the most eminent

chemists of the present day, in a manuscript memoir of Dr WRIGHT, which has never been published. "It is remarkable," he says, "that the usual acids which it appears to be the province of the kidneys to form, either disappear altogether, or become exceedingly scanty. These are uric acid, sulphuric acid, and phosphoric acid. In place of these, a quantity of sugar is found in the urine, and must be produced by the kidneys, the office of which appears, in this disease, to be perverted. This disappearance of acids would lead to the notion that, in all probability, acids might be useful in this hopeless disease."

The history of the process of reasoning which leads to important discoveries, is always an interesting subject of inquiry. But, in the present case, it is necessary to dismiss the ingenious hypothesis which has just been quoted, without suggesting a better: For, in writing, many years afterwards, to his friend Dr GARTSHORE, in answer probably to some inquiry on the subject, Dr WRIGHT observes, "that he was not led to the use of his specific in diabetes, by the doctrines of the modern chemistry."

About this period, also, Dr WRIGHT found leisure to write a number of those papers which were afterwards given to the world, on his return to Great Britain. This can only be accounted for by the systematic arrangement of his hours and duties; by the adoption of the golden rule, "A time for every thing, and every thing in its time; a place for every thing, and every thing in its place;" and by those strict habits of temperance and moderation in all his appetites, for

which he was distinguished. By this time, however, he began to experience a yearning desire to return to his native country. It was not exactly that home sickness to which the inhabitants of mountainous regions are said to be peculiarly subject, but was combined with that strong affection for his parents, which, up to this period, was the master emotion of his mind. "Crieff," he says in a letter to his brother, "you think one of the finest villages in Scotland. I thought so too: but if my ideas are altered on seeing it again, I cannot help that. I hope not, and that I may find the society of the place, and its neighbourhood, so agreeable as to induce me to sit down quietly amongst you. Whether, after an absence of eighteen years, twelve of them of excessive fatigue in this sultry climate, my inclination would lead me, or my ability or strength admit of my practising again at home, I cannot determine till I see you. I cannot come to you till next summer. It is enough that my reasons are good, and cannot be dispensed with. It has given me much concern; but I must not allow my health or spirits to be affected by it, but endeavour to preserve them to be a comfort to our parents."

In the following year, he again writes, "I am doing every thing I can to get away from this island. Pray remember me with affection to my father and mother, and help them to keep heart. Remember me also to my sister, and the little strangers. After an absence of nineteen years, my acquaintances in Crieff must be few; but my memory is strong; and if a single feature remains unchanged, I shall be able to recall it."

The adjustment of accounts with their numerous

debtors, appears to have occupied the attention of Dr WRIGHT, and his partner Dr STEEL, during the greater part of the year 1776. Every thing seems to have been conducted in the most amicable manner, as well between the partners themselves, as in their settlements with third parties. But at a period when the rate of exchange was very unfavourable, Dr WRIGHT found so many difficulties in realizing what was due to him, that he at length resolved, in the month of July 1777, to embark for England, and on the 1st of August, he set sail from Montego Bay, on board the Thomas Hall, THOMAS MERCER, commander, bound for Liverpool, accompanied by a fleet of seventy-six merchantmen, and protected by a convoy of three ships of war.

About two years before Dr WRIGHT'S departure from Jamaica, his friend and partner Dr STEEL was married to the daughter of a neighbouring planter; but that circumstance produced no alteration in Dr WRIGHT'S domestic arrangements. The two friends continued to reside together under the same roof, maintaining to the last that perfect harmony and mutual good understanding which had continued undisturbed during a connection of fourteen years. In his anxiety, however, to effect his purpose of breaking away from Jamaica, Dr WRIGHT was at last obliged to content himself with such a supply of money as his immediate exigencies required, and to leave the greater part of the fruits of his labour to the proverbial uncertainty of West India remittances, after his arrival in Great Britain.

On the 22d of August, the fleet experienced a vio-

lent gale, which lasted for several days; so that twenty-two sail parted company, "and no doubt some of them," Dr WRIGHT observes, "have fallen into the hands of the rebels." The rest of the passage was stormy, and would now be considered tedious, the fleet having been at sea for sixty-five days.

It was in the course of this passage that an event occurred, which is not only important as it affords an illustration of Dr WRIGHT'S character for moral courage and professional skill, but as it has become so prominent an object in the history of the healing art, and has had so material an influence in improving the lot of humanity. It would be doing injustice to the subject to record the fact in any other than Dr WRIGHT'S own words.

"On the 1st of August 1777, I embarked," he says, "in a ship bound to Liverpool, and sailed the same evening from Montego Bay. The master told me he had hired several sailors on the same day we took our departure, one of whom had been at sick quarters on shore, and was now but in a convalescent state. On the 23d of August, we were in the latitude of the Bermudas, and had had a very heavy gale of wind for three days, when the above mentioned man relapsed, and had a fever, with symptoms of the greatest malignity. I attended this person often, but could not prevail with him to be removed from a dark and confined situation, to a more airy and convenient part of the ship; and, as he refused medicines, and even food, he died on the eighth day of his illness.

"By my attention to the sick man, I caught the con-

tagion, and began to be indisposed on the 5th of September; and the following is a narrative of my case, extracted from notes daily marked down. I had been many years in Jamaica; but except being somewhat relaxed by the climate, and fatigue of business, I ailed nothing when I embarked. This circumstance, however, might perhaps dispose me more readily to receive the infection.

"*September* 5, 6, 7.—Small rigors now and then; a preternatural heat of the skin; a dull pain in the forehead; the pulse small and quick; a loss of appetite, but no sickness at the stomach; the tongue white and slimy; little or no thirst; the belly regular; the urine pale and rather scanty; in the night restless, with starting and delirium.

"*September* 8.—Every symptom aggravated, with pains in the loins and lower limbs, and stiffness in the thighs and hams.

"I took a gentle vomit on the second day of this illness, and next morning a decoction of tamarinds; at bed-time an opiate, joined with antimonial wine; but this did not procure sleep, or open the pores of the skin. No inflammatory symptoms being present, a drachm of Peruvian bark was taken every hour for six hours successively, and now and then a glass of port-wine, but with no apparent benefit. When upon deck, my pains were greatly mitigated, and the colder the air the better. This circumstance, and the failure of every means I had tried, encouraged me to put in practice on myself what I had often wished to try on others, in fevers similar to my own.

" *September* 9.—Having given the necessary directions, about three o'clock in the afternoon, I stripped off all my cloaths, and threw a sea-cloak loosely about me, till I got upon the deck, when the cloak also was laid aside. Three buckets full of salt water were then thrown at once upon me. The shock was great, but I felt immediate relief. The headache, and other pains, instantly abated, and a fine glow and diaphoresis succeeded. Towards evening, however, the same febrile symptoms threatened a return, and I had again recourse to the same method as before, with the same good effect. I now took food with an appetite, and, for the first time, had a sound night's rest.

" *September* 10.—No fever, but a little uneasiness in the hams and thighs; used the cold-bath twice.

" *September* 11.—Every symptom vanished; but, to prevent a relapse, I used the cold-bath twice.

" Mr Thomas Kirk, a young gentleman passenger in the same ship, fell sick of a fever on the 9th of August. His symptoms were nearly similar to mine; and, having taken some medicines, without experiencing relief, he was desirous of trying the cold-bath, which, with my approbation, he did on the 11th and 12th of September; and, by this method, was happily restored to health."

In the course of the correspondence which will be introduced in the sequel, there may probably be occasion to recur to this interesting and important narrative; but it is proper, in this place, so far to anticipate the chronological order of events, as to notice that the narrative itself was communicated to the

London Medical Society in 1779, and was published by Dr SIMMONS, in the London Medical Journal for 1786.

As an illustration of the circumstances, and of the general train of reasoning which led Dr WRIGHT to the adoption of this bold and successful experiment on his own person, it may here be mentioned, that, in the course of his practice in Jamaica, he had repeatedly employed the cold bath in cases of tetanus, or locked jaw, and other convulsive disorders. On this subject, Dr JAMES LIND, in the fourth edition of his Essay on the Diseases of Hot Climates, page 271, published at Edinburgh in 1778,* puts the following inquiries:— "As the locked jaw most frequently makes its appearance in warm weather, and in hot countries, would not an immediate change of air prove the means of saving the patient's life? And where it is impossible to remove the patient into a cool air, would not some benefit be derived from the immersion of the whole body, or part of it, in cold water, adding frequently sal ammoniac, or nitre, in such quantities, that, by their continual solution, the water may acquire the utmost degree of coldness? Agreeable to this, my friend Dr WRIGHT has of late very successfully employed at Jamaica, the affusion of cold water on the naked body, in cases of locked jaw."

The ancients were undoubtedly acquainted with the advantages of the cold bath in this disease; but they supposed that its beneficial effects did not extend to such cases as originated in wounds, or local injuries;

* The first edition appeared in 1768.

a limitation of its efficacy which Dr WRIGHT ascertained to be erroneous.

On his arrival in Liverpool, on the 5th of October 1777, he found that the debility produced by the fever, and the discomforts attending a tedious passage in stormy weather, had considerably impaired his general health. To this was added the state of hazard and uncertainty attending a West India investment of property, which at that time was greatly enhanced by the alarm which had arisen as to the future stability of the whole trans-atlantic possessions of the crown. Above all, he was agitated by the contending emotions created by the desire to proceed to Scotland, and embrace his parents and his friends; and by the opposing calls of prudence and of duty which required him to direct his steps to the metropolis, for the superintendance and protection of his own pecuniary interests, with those of his partner Dr STEEL, and other friends in Jamaica, the charge of which his obliging disposition had prompted him to undertake. These latter considerations predominated; and after recruiting his strength for a few days at Liverpool, he proceeded by easy stages to London.

During his stay in London, Dr WRIGHT resided with his friend Dr GARTSHORE, who had established himself in a lucrative and respectable practice in St Martin's Lane, in the obstetric department of the profession. The correspondence he had long maintained on literary and scientific subjects with Mr BANKS and Dr SOLANDER, those accomplished naturalists, and enlightened men, who had already circumnavigated the globe in quest of knowledge, afforded him a ready introduc-

tion to classes of society, to the enjoyment of which it is no mean ambition to aspire. He writes with rapture of the weekly conferences at the house of Sir JOHN PRINGLE—those *noctes cœnaeque deum*,—at which he had often the happiness to assist; and there is no limit to the enthusiasm with which he expatiates on the celebrated collection of Mr BANKS, to which he had the satisfaction of adding several hundreds of specimens. Among his personal friends, he had the pleasure of ranking Dr FOTHERGILL and Dr WILLIAM PITCAIRN, two distinguished collectors, between whom there subsisted an honourable and friendly rivalship, to the amusement of their contemporaries, and the benefit of science, for priority and precedence in the number and the rarity of their acquisitions.

In such circles, the company of Dr WRIGHT was courted, from the ample store of information he possessed, and from the talent for conversation which enabled him to make his knowledge at all times available, independent of the rich collection of exotics which he brought with him to Europe, and the liberality with which he shared his riches with his numerous friends.

Soon after his arrival in London, he was induced to submit a memoir to the Royal Society, at that time under the presidency of Sir JOHN PRINGLE, on the subject of the cabbage-bark tree of Jamaica, which was published with illustrative engravings, in the Philosophical Transactions for 1778. Ostensibly as an acknowledgement for this communication, but rather, as he inclined to regard it, in testimony of the friendship of Mr BANKS, and the other magnates of the aristocracy of letters, he was admitted a Fellow of the Royal Society.

after the shortest period of probation which was consistent with the due observance of its rules.

The hours which could be spared from the important duties which detained him in London, he had thus the fullest opportunity of employing with advantage and satisfaction. In the Royal Gardens at Kew, that noble monument of the taste and munificence of GEORGE III, Dr WRIGHT possessed peculiar sources of information and enjoyment, in watching the progress of those natives of the torrid zone, which he had formerly transmitted to Mr AITON, the superintendant, as a contribution to this splendid epitome of all that is rare and valuable in the vegetable kingdom. In Mr AITON himself, the respectable author of the Hortus Kewensis, he found an able and obliging assistant in his botanical researches; so that in the society of his literary friends in London, and in his devotions at the shrine of Flora, in this her favourite retreat, he found alternate sources of solace, from those harassing cares which threatened to deprive him, and the friends for whom he had toiled, of the hard earned fruits of twenty years' labour and anxiety.

To an original thinker like Dr WRIGHT, who admitted no dictum upon mere authority, nor any theory without evidence, it was no inconsiderable advantage to have an opportunity of submitting the views which had been elicited, under the peculiar circumstances of a tropical climate, and an insulated situation, to the candid and confidential examination of the highest names in the profession. At the stated meetings of the London Medical Society, and at the

private houses of many of its most distinguished members, he enjoyed this advantage in a very eminent degree; and while at these interesting interviews he supplied his full quota of ratiocination and discovery, he was enabled to bring up the state of his information to the level of the latest improvements in the medical art. It was on the records of the Medical Society, that the evidence was preserved of Dr WRIGHT'S indisputable priority in the use of cold water in fever, by the communication of that remarkable narrative, from which an extract has already been given. But although the narrative itself was read at three different meetings of the Society, and although it was communicated in consequence of a request that it should appear in the sixth volume of the Medical Reports; yet such is the force of prejudice in the highest walks of a profession which claims, *par excellence*, the palm of liberality, that the interesting paper, and the important facts which it recorded, were silently suppressed; so that it was not given to the world until the second return of Dr WRIGHT from the West Indies in 1786.

In consequence of the gloom which at this period pervaded the western horizon, and of the probability which thence arose of its being necessary to resume the practice of his profession, Dr WRIGHT was warmly urged by many of those friends who could appreciate his talents, and were acquainted with his medical skill, to set himself down as a physician in the metropolis. But whether from a certain diffidence of manner in the presence of strangers, which, in his case, may be said

to have been constitutional, and the total want of that *brusquerie* and self-assurance, so necessary to success in this bustling profession ; or whether he was actuated by an undefined and lurking preference for the northern capital, he hesitated about the adoption of the advice which was offered him ; and at length resolved, as appears by a letter to his brother, to be guided by the opinion of his friends on the other side of the Tweed.

Dr WRIGHT left London on the 15th of January 1778, and arrived soon afterwards in Edinburgh. From thence he proceeded to Crieff, where, if we may judge from the hiatus in the correspondence with his brother, he appears to have made a stay of several months.

When a young man sets out in life with firmness of character and habits of reflection, sufficient to guide him, unassisted, on his onward path, he generally proposes some object in the distance as the goal for which he is to strive. In the case of Dr WRIGHT, the even tenor of his way was never disturbed by any project of unreasonable ambition. The purpose of contributing to the comfort of his parents in their declining years, was, in his case, more a passion than a duty. It constrained him to hasten his departure from Jamaica prematurely ; and the pain and disappointment he experienced must have been proportionably aggravated, when he found his expected remittances so miserably deficient as to be little more than equal to his own immediate wants.

With the view of offering some tangible induce-

ment to Dr WRIGHT to take up his abode among his friends in Perthshire, his brother had, some time before his arrival, erected a house for him, which was always known in the neighbourhood as "Dr WRIGHT's house." To insure its fitness in point of warmth and comfort for the reception of a visitor from the torrid zone, Mr JAMES WRIGHT and his family had removed into it, leaving their own house unoccupied, to wait Dr WRIGHT's arrival. But in the painful state of uncertainty in which he found his affairs to be involved, he thought it best for the present to forego any separate establishment, until he should be able to form some definite resolution as to his future mode of life. He continued to foster the hope, that such a favourable change might arise in the aspect of public affairs, as would enable him, by realizing his West India investments, to accomplish a long cherished purpose of purchasing some small estate in his native county. In the mean while, he would not permit his brother's family to return to the inferior accommodations of their own residence, but proposed, until better times should arrive, to reside with them in the new house, as their friendly lodger.

It was in the course of this visit that Dr WRIGHT, with his usual warmth of feeling, attached himself, with paternal tenderness, to his nephew, JAMES WRIGHT, the only son of his brother, a boy at that time about eight years of age. He undertook to superintend, as well as to defray the expence of, his education—a duty which he discharged with exemplary fidelity; and thus, by a reciprocity of the most en-

dearing sentiments of gratitude and affection, drew close the ties which nature has entwined around the domestic hearth. Thus arose an attachment affording scope and exercise for the best and purest attributes of humanity, but liable, alas! like all human possessions, to premature decay. Let us indulge the delightful assurance, that the interruption which their intercourse sustained by the too early death of a young man of the highest promise, was only destined to continue for a season, and that their restoration to each other has now been placed beyond the reach of casualty or change.

In the course of the summer of 1778, Dr WRIGHT made the tour of the west of Scotland, partly in pursuit of the objects of that delightful science which

> Finds tongues in trees, books in the running brooks,
> Sermons in stones, and good in every thing—

and partly with a view to make the personal acquaintance of those literary and scientific correspondents with whom he had long been on habits of epistolary intercourse. Of this number was the Earl of BUCHAN, at whose seat, in the neighbourhood of Linlithgow, Dr WRIGHT spent several happy days.

On his arrival in Edinburgh, at the conclusion of his tour, Dr WRIGHT was invited to become a member of the Royal College of physicians. But in the uncertainty under which he still laboured as to the course which it might be necessary for him to pursue, and in the precarious condition in which his finances unfortunately remained, making so small a matter as

L.50 an object of some consideration, he judged it prudent to postpone at least the acceptance of the honour proposed to him. He did not hesitate, however, to avail himself of the opportunity which was afforded him by the politeness of the profession, of profiting by the lectures of BLACK, MONRO, and CULLEN, whose reputation at that time shed a lustre around this northern seat of science.

About this period, also, he writes to his brother, that a number of literary gentlemen, consisting chiefly of physicians, lawyers, and divines, had formed themselves into a Philosophical Society a few months before.* "While last at Crieff," he says, "I was elected a member. They mean to publish periodical volumes of literary and philosophical essays, and as my stock of observation is considerable, I shall be at no loss in furnishing my quota."

On the death of his friend Dr RAMSAY, the Professor of Natural History in the University of Edinburgh, in the month of December 1778, a proposal was made to Dr WRIGHT to become his successor; but although it was never doubted by the patrons of the University that Dr WRIGHT was peculiarly fitted to conduct the study of a science in which his mind had been so deeply engaged for the greater part of his life, yet he thought it right to discourage, and at length definitively to decline, the proposal, in consequence, as it appears from his letters to his brother, of certain scrupulous misgivings as to his own qualifications in some subordinate departments of the science.

* This Institution gave rise to the Royal Society of Edinburgh.

The summer of 1779 was again devoted to his friends in Perthshire, so that another blank has been created in the correspondence with his brother, from whence the greater part of the materials has been derived for the earlier portion of these imperfect sketches. His brother seems to have been urging him thus early to assist in the choice of a profession for his nephew. In a letter dated from Edinburgh, he says, "I shall be glad to hear from JEMMY. His profession in life must be left to himself. I wish it may be one that will not oblige him to wander, as I have done, amidst a thousand difficulties, anxieties and dangers." It was in this year that Dr WRIGHT had to lament the loss of his father, at the age of 84, a circumstance which only tended to strengthen the bonds of affection between him and the other members of his family.

On the 18th of September 1779, he writes to his brother, that a squadron of French men of war had been cruising in the estuary of the Forth for several days. He mentions that they had made a number of captures, and appeared to threaten a descent in the neighbourhood of Leith. On the 23d of September, he again writes, "I have received all the things you mention—the sword in good condition. He that would not draw one in defence of his country, is unworthy to live in it."

At the instance of his friend Mr BANKS, who had now been called by the unanimous voice of the fellows to the chair of the Royal Society, Dr WRIGHT was induced to direct his views once more to the island

of Jamaica, which, with our other West India possessions, had long been menaced by a powerful armament under the French admiral D'Estaign. About the end of the year 1779, a corps of infantry was raised under the name of the Jamaica Regiment, a condition of whose services it was that the corps should not be called on to do military duty beyond the limits of the single island for the protection of which it was originally organized. This regiment was given to General Rainsford, a near relation of Mr Banks, through whom Dr Wright received the appointment of regimental surgeon, an office which he accepted the more readily, as it afforded him the prospect of a favourable opportunity for placing his pecuniary concerns in a more satisfactory position.

Before leaving Edinburgh on this occasion to assume the medical charge of the troops, Dr Wright was induced to become a licentiate of the Royal College of Physicians, with a view probably to his becoming a fellow of that respectable body on his return.

The first detachment, consisting of five hundred men, was placed under the command of Lieutenant-Colonel Balfour, with whom Dr Wright proceeded from London to Warwick on the 1st of April 1780. In external appearance and physical force, the detachment is described as a fine body of men, but ranking, in point of morals, on the very lowest level, having chiefly been drafted from the overflowings of the London prisons, and several of them having been recognized by Dr Wright as the leaders of the mutiny in one of the regiments of Scottish

fencibles, which, concurring with the presence of a French squadron in the Firth of Forth, created so much alarm in Edinburgh in the year 1779.

On their arrival at Hillsea Barracks, Portsmouth, on the 23d of June, the troops were reviewed by General MONKTON, and, on the 27th of July, they were embarked on board the transports prepared for their reception, which, with a fleet of merchantmen, amounting in all to fifty-five sail of unarmed vessels, were placed under the protection of the Ramilies 74, the Thetis and Southampton frigates. On the 29th, the fleet was joined off Portsmouth by the Inflexible 74, and two other ships of war, by whom they were attended for eight days, until their force was strengthened after clearing the Channel, by a powerful armament under the command of Admiral GEARY. On board the Morant transport, in which Dr WRIGHT had embarked, he had for messmates Lieutenant-Colonel BALFOUR, Captain CROKER, and three subalterns, besides the Adjutant of the regiment, his wife, and four children. Two full companies of the corps, with women and children, made the total number, exclusive of mariners, amount to 202 persons on board the Morant. The squadron under Admiral GEARY, with a fleet of Indiamen, soon afterwards parted company, so that the fleet from Portsmouth was again left under the exclusive guardianship of the Ramilies, the Thetis and Southampton.

Two days after the separation, a dense fog arose, and at day-break, on the following morning, when in the neighbourhood of Cape St Vincent, the Morant

found herself under the wake of a line of battle ship, bearing Spanish colours, and a Vice-Admiral's flag. At a short distance they could descry several French men-of-war, one of whom was distinguished by a Rear-Admiral's flag; and it soon became obvious that the whole of the transports and merchantmen had fallen into the hands of the combined fleets of France and Spain, —a loss, perhaps, the greatest which the mercantile navy of Great Britain had ever sustained. The force of the enemy was so overwhelming that any attempt at resistance on the part of the Commodore would have been quite unjustifiable. The return of the fog afforded the only chance of escape; and in this they were disappointed. The ships, however, were cleared for action: Cabins and catheads were knocked away: the soldiers were placed under arms; and such guns as they had on board the Morant were cleaned and prepared for the reception of the enemy. These preparations having been observed on board of the Spanish Admiral, the Morant was saluted with a broadside, which being directed chiefly to the rigging, cost them the life only of one poor woman, the wife of a sergeant of the regiment. The Adjutant and his family were permitted to remain on board the Morant; but the other officers were transhipped to the Bourgogne, a French 74; and having been permitted to carry with them their personal luggage, Dr WRIGHT had the address to secrete the colours of his regiment in one of his trunks, and two days afterwards, when on board the Bourgogne, to get them thoroughly destroyed.

The British officers were greatly amused with the manners of the Frenchmen, and with their habits and discipline, or rather want of discipline, on ship-board. M. MARIEN, the commander of the Bourgogne, is described as a sloven in his dress, at table a gourmand, and a gascon in conversation. The favourite topic of the day was the supremacy of the House of Bourbon, and the speedy prostration of all Europe, before the arms of the Allies. On the 29th of August, the fleet cast anchor in the Bay of Cadiz, and, on the 3d of September, the British officers were placed on their parole, and permitted to land. On this occasion Dr WRIGHT had the greatest difficulty in escaping from the courtesies of M. MARIEN, who thought it necessary to express his sorrow at parting with his prisoners, by kissing them from ear to ear.

The officers were landed at Santa Maria, and conducted to the Passado, where they were civilly saluted by well dressed people of both sexes, with "How do senor Inglese." They afterwards went to the amphitheatre to see a bull-baiting, which seems to have been a sad scene of butchery, nine wretched animals having been first goaded to madness, and then destroyed; but the Spaniards pronounced it poor sport, as neither man nor horse had suffered any injury.

On the following day they were marched into the interior, under a military escort, commanded by an Irish officer in the Spanish service, of the name of MALONE. The town of Xeres de la Frontera, so famous for its white wine, completed the first day's march; having passed through a district in a high

state of cultivation, and remarkable chiefly for its rich plantation of olives; but they arrived too late for any better supper than bread and cheese, with a seasoning of garlic; nor could they prevail on their host to produce a flask of sherry, except such as was too new to be fit for the table. The next day's march brought them to Arcos, where the British officers found themselves to be objects of great interest to the wondering natives. They had now arrived at the location assigned for them by the Spanish authorities; and they lost no time in making themselves as comfortable as the place and the circumstances would admit.

Arcos is a town of Moorish origin, situate on the summit of an eminence on the banks of the Guadalete, which, in the course of ages, has worn itself a deep and precipitous channel, and has in several places undermined the ancient buildings and fortifications of the town. During their residence in Andalusia, the British officers had frequent occasion to place the activity and industry of their own countrymen in favourable contrast with the habits of the natives. The narrow streets of Arcos were constantly thronged with crowds of idlers, in such extraordinary numbers as to induce Dr WRIGHT to make some general enquiry on the subject. From the result he was led to the conclusion, that the modern Spaniards had sadly degenerated from their forefathers, in every moral quality, and that industry and virtue had in a great measure been exiled from the Peninsula with the Moors. During the olive season, and the period of the vintage, which together do not occupy more than two or three months,

these people are able to earn enough to support themselves in idleness for the remainder of the year; but this, perhaps, affords only another modification of a principle which is common to human nature. In favourable seasons our own artisans are known to work only so many days of the week as will enable them to devote the remainder to idleness and relaxation. The machinery of the olive-press was of a most imperfect description, similar in form, but inferior in power, to that which was then used in Scotland, in the manufacture of linseed oil. The flocks of sheep in the neighbourhood are spoken of as highly valuable; and great attention appears to have been paid to the process of irrigation, by which the value of the pasture was materially enhanced.

Within a circuit, of which Arcos was the centre, the radius being equal to six English miles, the British officers were allowed to ramble, and to enjoy the amusements of fishing and shooting. In the sluggish and muddy waters of the Guadalete, they found abundance of eels and mullet; and on the banks, a rich variety of aquatic plants, for the commencement of a new herbarium, Dr WRIGHT having lost the valuable collection which he had brought with him from England, on his transhipment from the Morant to the Bourgogne. On the one side, the mountains of Grenada encroached on their allotted boundary, and afforded considerable variety to the sports of the field. On the low grounds they had a great variety of wild fowl, with hares and rabbits in abundance; but the sportsmen of the party found their chief amusement

in hunting the wolf on the first rise of the mountains.

While the other officers, however, were restricted to these narrow limits, the medical skill of Dr WRIGHT introduced him to a wider circle of usefulness and enjoyment. In many of the diseases which he had occasion to notice during the excessive heats of September and October, he observed a strong analogy with those which are usually described as peculiar to tropical regions; and the remedies which this analogy suggested, were found to be attended with the most successful results.

The ridicule of their great national satirist appears to have never reached the medical practitioners of Arcos. Bloodletting and warm-water, the favourite practice of Sangrado, was here the order of the day. At this period, indeed, the medical student enjoyed no other means of acquiring a knowledge of his profession than by living in family with a practising physician, and attending him on his visits to his patients. At Salamanca and Seville, and most of the other Spanish universities, the course of study seems to have been confined to the philosophy of ARISTOTLE, the doctrines of civil law, and the tenets of scholastic divinity. There was, it is said, at that time but one demonstrator in anatomy in the whole province of Andalusia, and his residence was at Cadiz. Surgery was in consequence in the lowest state of degradation. The business of the apothecary was distinct, indeed, from the practice of the physician; but surgical operations were an object of competition between the apothecary and

the barber. At the shops of the apothecaries Dr WRIGHT found the greatest difficulty in supplying himself with the medicines he required. The prescriptions of the physicians he found as tedious, and their materia medica as complicated, as they had been in Great Britain a century before. But, as the principles of inductive reasoning had not yet found their way into the Spanish seats of learning, it was not to be supposed that the simplicity of modern science could be successfully applied to the practice of medicine, until the light of knowledge was more generally diffused.

The simplicity, the novelty, and success of Dr WRIGHT'S practice among his brother officers, and their families, soon attracted the attention of the gentlemen of Arcos and its neighbourhood. In cases of difficult labour, it was a recognised rule that the infant should, if possible, be saved, although at the expence of the life of the mother; and the reason assigned for it was, that another christian might be added to the church. A rule so abhorrent to the feelings of humanity, was followed by its natural result. The compulsory care of the physician was terminated by the ceremony of baptism; and from thenceforth the young christian was consigned to the care of some ignorant domestic.

Dr WRIGHT'S introduction to the native society of Arcos, originated in a case of this kind. Don ANDREA CAMBREA, a man of considerable fortune, and of high rank in the secular department of the priesthood, waited on Dr WRIGHT, and represented to him

that the infant daughter of his brother was so dangerously ill that the family physician had declined to prescribe for her. Having prevailed on Dr WRIGHT to visit the little girl, he found a case of fever incident to childhood, which happily yielded to the antimonial powder which he administered. From this period his hands were full of practice; and leave was obtained for him, in several important cases, to extend his visits far beyond the line by which the rambles of his fellow prisoners were circumscribed.

On one occasion, he was requested to proceed to Cadiz to attend a lady, whose case had been given up as hopeless by the physicians of the place. On his arrival there, he found to his surprise that his patient was a near relation of his old friend Butler, the surgeon of the Intrepid, and that she had been one of a family of children who had sailed with him as passengers from Gibraltar to England, in the year 1759. The family had been for some time settled in Cadiz; and such of them as chanced to have been born in Gibraltar were recognised as Spanish subjects by the authorities of the place. It was otherwise with the older branches, who were natives of Ireland. They were regarded as aliens, and were forced to reside at a distance from their friends, in the interior of the country, where several of them had formed connections with native families of distinction. Through this channel Dr WRIGHT was enabled to recover a part of the property which he had been induced to abandon on board the Morant, in his anxiety to secure the colours of his regiment. He obtained the greater part

of his books, but of the collections of dried specimens, on which he placed the greatest value, no trace could afterwards be found.

The jealousy of his fellow prisoners was, however, chiefly excited by the admission which his fame procured for him into the nunneries of Arcos,—a privilege which he found to be valuable only in proportion to its singularity, and possessing no attractions after he had gratified the first impulse of curiosity. On such occasions the foreign physician was attended by the prior of a neighbouring convent, who, through the medium of Latin, was in use to act as interpreter between him and his patients. The greatest precaution was observed on their admission. They were preceded by the Lady Abbess, and one of the most ancient of the sisterhood, who, in their progress through the long passages of the building, kept incessantly tinkling the hand-bells which they carried to announce their approach, and, as may be supposed, to warn the fair inmates against the unseasonable indulgence of an idle curiosity. The hall into which they were shewn was uniformly darkened, and the Doctor was permitted to see his patients, as they were successively introduced, by the light of a lamp. It was with great difficulty that the ladies were persuaded to unveil, and not until the Doctor had declared that he could not prescribe, with any chance of success, until he had seen the faces of the fair invalids. But the age of romance had passed away, the uplifted veil discovered neither youth nor beauty, and even the genius of a Radcliffe would find no materials for a tale of mystery in the

professional visits of Dr WRIGHT to the nunneries of Arcos.

The departure of the British officers from the territories of his Catholic Majesty, was unexpectedly accelerated by the discovery of certain emblems of freemasonry in the possession of one of the party, which appear to have excited the vigilance of the officers of the Inquisition. An entry was forcibly effected into the lodgings of the young gentleman who possessed the unfortunate apron; but, on the proposal of the Corregidor, with his possè of priests and officials, to extend their domiciliary visits to the houses of the other officers, the English gentlemen resolved to resist the intrusion, and to repel force with force. The local functionaries of this dark tribunal were startled at the resolution of the British strangers; they desisted from farther molestation; but, in ten days afterwards, an order arrived from Madrid to march the prisoners across the Spanish frontier.

On this occasion they were again escorted by their old friend Mr MALONE. Their route lay across the Guadalquivir, leaving the city of Seville, to their great regret, about three miles to their left. On the tenth day of their march, they reached the left bank of the Guadiana, where they were left by Mr MALONE and his party, to fight their way as they best could through the Portugueze territory, to the shores of the Atlantic.

It was agreed on all hands that Lisbon was the most convenient point for embarkation; but a difference of opinion arose as to the route to be adopted. A division of the party was at length resolved on. The one-

half undertook to traverse the mountainous regions of the ancient kingdom of Algarve; but Dr WRIGHT, and the remainder of the party, proposed more prudently, if we may judge from the event, to follow the course of the Guadiana, and engage a coasting vessel to carry them and their baggage to the mouth of the Tagus. Having been thrown upon the Portugueze territory without passports, the provincial authorities refused to recognise them as the subjects of a friendly power; and those gentlemen who proceeded overland to Lisbon were seriously maltreated in the course of the journey. The coasting party were more fortunate. They dropped down the Guadiana, and proceeded as far as Taro in an open boat. At Taro they rested four days, and having freighted a sloop to carry them to Lisbon, they reached that city in safety on the 21st of December 1780.

On the 24th, they embarked in the Hampden packet; and, after a pleasant passage, arrived at Falmouth on the 6th of January 1781.

Dr WRIGHT was accompanied, in his Peninsular adventure, by a young gentleman who had resided for some time with his friends in Edinburgh; but his destination being the Island of Madeira, where the Jamaica Regiment was to have touched in the course of its passage, Dr WRIGHT consented to undertake a charge which probably proved more serious than he at first anticipated. On their arrival in London, however, about the middle of January, they found that an uncle of his protegè had arrived from Madeira, to whom the guardianship of the young traveller was immediate-

ly assigned. The superior facility which this young gentleman displayed in the acquisition of the kindred languages of the Peninsula, as compared with the imperfect advances of his senior associates, affords a striking confirmation of the received opinion, that youth is the most favourable period for this department of study.

Immediately on his arrival in London, Dr WRIGHT reported himself to General RAINSFORD, the Colonel-in-Chief of the Jamaica Regiment, by whom he was thanked for the signal service he had performed in preventing the regimental colours from falling into the hands of the enemy.

By a scrupulous interpretation, as it appears, of the code of honour, rather perhaps than from any obvious necessity arising from the principles or practice of international law, it was held that the British officers were precluded by the parole which they had subscribed on their landing at Cadiz, from engaging in the hostilities which still subsisted with France and Spain, until they should be relieved by a regular exchange of prisoners, notwithstanding the unceremonious and extraordinary way in which their expulsion had been effected from the Spanish territory. To Dr WRIGHT, in particular, this delay was extremely vexatious. His last advices from Jamaica informed him that the health of his attorney was in a very precarious condition, and he was aware that, by this gentleman's death or incapacity, the wreck of his fortune would be placed in the greatest jeopardy. Under all the circumstances, however, he chose rather to wait the ex-

pected cartel with Spain, than hastily to throw up a commission which had been procured for him by his friend Mr BANKS, at so providential a crisis. In the mean time, he resumed his favourite pursuits, and sought for solace from the cares of the world in a closer application to those studies which are perhaps best fitted to sustain the "*mens sana in corpore sano.*"

About this period, Dr WRIGHT had to lament the loss of his friend Dr FOTHERGILL, the celebrated Quaker physician; but the kindness of Mr BANKS, and his friendship for Dr GARTHSHORE, had suffered no intermission or abatement.

In the midst of the anxiety which the embarrassments of Dr WRIGHT's situation were calculated to excite, he was never unmindful of the interest he had taken in the son of his brother, nor of the task with which he appears to have tacitly charged himself, of superintending his young friend's education. "When I formerly advised you," he says in a letter to his brother, dated the 12th of October 1781, "to have your son James taught some mechanical employment, I was induced to say so, from the innumerable difficulties I had met with in working my own way through life. Destined to be myself a wanderer over the face of the earth, could I recommend that James should follow a profession which has subjected me to so much hardship, distress, and danger? It is very right to send him to the Perth Academy. He is now old enough to be sensible of the importance of a good education; and he must double his diligence to make up for past defects. Let him begin the rudiments of

Latin anew. While doing this, he may be improving himself in writing, arithmetic, and book-keeping. I regret much that I had not an opportunity of learning to draw in my youth, as it is of real consequence to one in my profession. When I know the result of your and his deliberation, I shall say more. The expence of a medical education is great, and to you, with such a family, insupportable; but in this you will be assisted as far as my means will admit. My own education was narrow; and it was only by dint of resolution and perseverance that I afterwards acquired those necessary attainments which my dear father was unable to afford."

On the same date, he thus writes to his nephew. "You must sit down yourself, and inform me of your own wishes as to your future mode of life. When you do so, I shall give you my best advice and assistance. You will, I trust, be diligent in your studies, courteous, obliging, and attentive to every one. Associate only with persons of worth and good character, carefully shunning the wicked, the abandoned, and the low. Aspire to the company of your superiors, as from them only you can hope to benefit in your manners, conversation, or knowledge. Remember your duty to God and your parents; be kind to your sisters, and grateful to every benefactor and well-wisher. By these means, in whatever situation you may be placed, you will, I trust, be a good man, a good neighbour, and a sincere friend."

The summer of 1781 was devoted by Dr WRIGHT to his botanical pursuits, at such a moderate distance from London as would enable him to proceed to the

head-quarters of his regiment on a few hours' notice. Part of his time was spent very agreeably in the neighbourhood of Odiham, in Hampshire, at the residence of Mr BAXTER *, a friend of his from Scotland, who had been for some time settled in that delightful county, and through whom he became favourably known to a circle of friends, whom, in after years, he often revisited with new and increasing satisfaction.

At length, about the middle of September, a cartel was finally adjusted with Spain; but it was not until after Christmas that the first detachment of the troops arrived at Portsmouth. Dr WRIGHT immediately hastened from London to meet them at Alresford, where he arrived on the 1st of January 1782. By this time, a second detachment had arrived; but of the body of 500 men who had sailed with him from Portsmouth, in the summer of 1779, a miserable remnant, not amounting altogether to 200 in number, and in the most deplorable state of nakedness and destitution, was all that remained. A considerable proportion of them, including all those of the Catholic persuasion, had been induced, while in confinement at Cordova, to join the standard of the enemy; thus preferring the claims of clerical authority to the duty of civil allegiance, when the enjoyment of freedom was thrown into the scale. The number of deserters amounted to 200; the remainder had died of starvation, warm water, and loss of blood;

* This gentleman was a native of Berwickshire; and, about this period, is described by Dr WRIGHT as the son of Mr ANDREW BAXTER, a learned and worthy man of the last age, the author of Matho, or the Immortality of the Soul, and other pieces, and some time Envoy to the States of Holland, in the reign of Queen Anne.

and even of those who survived the prescriptions of the physicians, and withstood the machinations of the priesthood, a considerable number were found, on examination, to be unfit for service. The complement of five companies was, however, speedily supplied by draughts from the general depot in the Isle of Wight, and from the independent companies at Portsmouth; so that they were once more ready for sea on the 22d of April, on which day Colonel BALFOUR and Dr WRIGHT embarked on board the West Indian transport at Portsmouth, and sailed soon afterwards, with convoy, from Spithead.

Before leaving England, Dr WRIGHT addressed another letter of instructions to his brother, with a separate memorandum for the use of his nephew, containing the rationalé of his views on the subject of his young friend's education. His advice was not directed merely to the cultivation of the powers of the mind, or the acquisition of personal accomplishments. The dispositions and affections of the heart were equally an object of his fatherly solicitude,—a branch of education which does not always receive its due share of attention in the curriculum of domestic study.

The fleet on board of which the Jamaica Regiment, now called the 99th Foot, had embarked, arrived in the West Indies just too late to witness the victory obtained by Admiral RODNEY, over the French fleet, under DE GRASSE, when proceeding to join the Spaniards at Hispaniola, in making a descent on the Island of Jamaica, and the other possessions of Great Britain. The victory, however, was not so complete as to quell the alarm of the colonies. Of thirty-four

ships of the line, of which the French fleet had consisted, twenty-six had been suffered to escape; and, if allowed to refit, and to form a junction with the Spaniards at Cape François, there was no British force in these seas which could, at that time, have opposed an effectual resistance. In the mean time, however, their fears were happily disappointed by the general pacification which came very seasonably to their relief. The 99th was soon afterwards sent home to be disbanded; but Dr WRIGHT was permitted to remain in Jamaica for the settlement of his affairs.

His reception at Orange Hill by his old friends Dr and Mrs STEEL, was of the warmest and most affectionate description; but, in a few months after his arrival at Trelawney, Dr STEEL was seized with a fever, of which he died, on the 4th of August 1784. Mrs STEEL was left with five children, all amply provided for; and Dr WRIGHT was named one of the executors. He was restrained, however, from administering, by a sense of delicacy, which, in a West India executor, deserves to be recorded,—the greater part of his own fortune having been invested in the hands of Dr STEEL. The example of right feeling and correct conduct which was thus set by Dr WRIGHT, was met by his fellow executors with a corresponding spirit of moderation and good will; so that he was enabled to effect the realization of his property in a much shorter period than he could have anticipated, and allowed to devote the remainder of his time in Jamaica to an object which he had very near his heart.

That object was the restoration of the Hortus siccus, of which the want of feeling perhaps, rather than

the rapacity of M. MARIEN, had deprived him in the year 1779. He now addressed himself to the task of its renovation, with a perfect knowledge of the habits and location of the objects of his pursuit,—with a great accession of general knowledge, and with alacrity and zeal for the interests of science, as fresh and vigorous as ever. On this occasion he had not merely the satisfaction of completely restoring his former Herbarium, which, till then, as a dried collection of the native plants of Jamaica, was perfectly unique; but of adding several new and non-descript species to his long list of discoveries. Neither did he disregard those natives of the neighbouring islands, which, though not indigenous to Jamaica, had been reared and naturalized by the friendly hand of the florist, or had been forwarded for his herbarium by his more scientific correspondents. In this year, too, he had for his *collaborateur* the celebrated SCHWARTZ, the Swedish botanist, who, in his great work on the Plants of the West India Islands, acknowledges with gratitude the personal attentions and efficient assistance he received from Dr WRIGHT. The title of Dr WRIGHT to the discovery of a number of new species, is distinctly recognized in the work of M. SCHWARTZ, in the names and synonymes he has appended to them; and reference is repeatedly made to the medical dissertations of Dr WRIGHT on the subject of these discoveries, in such terms as the following: "*De usu ejus medico* (Geoffraea inermis, viz.) *longe lateque disseruit, l. c. alibique clarissimus* WRIGHT *."

* In the Wernerian Society's Transactions, vol. i. p. 73. a very high compliment is paid to Dr WRIGHT, by Mr ROBERT BROWN,

It was some time after his arrival in Jamaica, before Dr WRIGHT was presented to Brigadier-General CAMPBELL, the new Governor, in consequence of the avocations and arrangements which were necessary for placing the island in a satisfactory posture of defence. At first, indeed, "the inundation of CAMPBELLS, MACLEANS, and MACLAUGHLANS," and the disproportionate share of the Governor's favour which they

universally recognized as the most eminent botanist of the present day. In constituting a new genus, and naming it after Dr WRIGHT, he expresses himself in the following terms:

"WRIGHTIA. [Nerii sp. *Linn.*

CHAR. *Corolla* hypocrateriformis. *Faux* Coronata squamis decem, divisis.

Stamina exserta. *Filamenta* fauci inserta. *Antheræ* sagittatæ, medio stigmati cohærentes.

Ovaria 2, cohærentia. *Stylus* 1, filiformis, apice dilatato. *Stigma* angustius.

Squamæ 5-10, basi calycis extra corollam insertæ.

Folliculi distincti, v. cohærentes, placentis adnatis.

HABITUS. *Frutices* erecti, arboresve minores. *Folia* opposita. *Corymbi* subterminales. *Flores* albi. *Albumen* 0. *Embryo* cotyledonibus longitudinaliter involutis, albus, aqua calida immersus roseus evadit!

PATRIA. India Orientalis, Zeylonia, Archipelago Malaica, et Nova Hollandia tropica.

Obs. GÆRTNER has given an excellent account of the fruit of this genus, in his description of Nerium Zeylanicum, and he no doubt supposed that the fruit of Nerium Oleander was essentially the same. It is, however, very remarkably different, and no genus is more distinct in habit, or more beautifully characterized, than this which I have dedicated to my respected friend WILLIAM WRIGHT, M. D. F. R. S. Lond. and Edin., whose ardour in the pursuit of botanical knowledge, even when engaged in extensive medical practice in the Island of Jamaica, has long entitled him to this mark of distinction."

were supposed to enjoy, appears to have created some little jealousy in a regiment which had been raised, like the 99th, so far to the south of the Tweed. But as soon as the alarm which was excited by the vicinity of a hostile armament had been removed by the general peace, the new Governor evinced the same disposition with his predecessors, to sanction, by his countenance and authority, the high station which Dr WRIGHT had acquired in the respect and esteem of the inhabitants. Immediately on his being relieved from the duties of his regiment, he was raised to the highest medical situation in the gift of the Governor, that of Physician-General of the Island; an office which, while by some it would be valued from the steps of precedence it inferred, or the trappings attached to it, at a military review, would by others be despised, from its pecuniary insignificance, but which was truly valuable, as an indication of the high character which Dr WRIGHT had continued to sustain after so long a period of probation.

While yet in Jamaica, Dr WRIGHT received a letter from his brother, announcing the death of their mother, at the advanced age of eighty-two. In his answer, he says, "Your letter of the 20th of June came to hand the 29th of August, but the agitation of mind occasioned by the contents will excuse the delay of my reply. From my mother's situation and time of life, we had every reason to expect what has happened; and while we drop a filial tear for one of the most affectionate of parents and best of women, let us be thankful to the Almighty for continuing her so

long to bless us, and for the assurance which a life of piety has left us of her happy immortality."

It appears that the Jamaica Regiment had not been a favourite in the service. The strong reinforcements which the defence of the island had rendered necessary, left a corresponding scarcity of accommodation in the barrack department; and, in order to make room for other troops of higher moral character, the 99th was ordered on board the transports, at the unhealthy station of Port-Royal. Here the health of Dr WRIGHT suffered severely by the fever and ague, which the adjoining swamps are so apt to engender; and from which even the pure air of Trelawny, and the colder climate of the mountains, did not suffice to restore him. From the slowness of his recovery, he allowed himself to be persuaded to delay his departure from Jamaica till the 1st of August 1785, when he embarked on board a ship bound for Bristol, and arrived there on the 23d September.

The death of his friend Dr STEEL, and his own serious illness in Jamaica, appear to have strongly impressed him with the uncertainty of human life. In a letter, dated from Trelawny, some time before his embarkation, he mentions that he had executed a testamentary settlement of his affairs, in which he had provided, in the first place, for the education and outfit of his nephew; and, after certain fixed legacies to his nieces, he had bequeathed the residue to his brother and sister-in-law, with unlimited discretionary powers, for its ultimate division and disposal; an arrangement which was admirably calculated for meet-

ing every probable contingency, and for sustaining, at the same time, the proper and becoming influence of parental authority.

On his arrival in London, about the end of September, Dr WRIGHT found his health so much impaired, as to make it unsafe for him, at that season of the year, to proceed to Scotland. The months of October and November he appears to have spent with his friends in Hampshire, where his strength was in a great measure restored. The winter was devoted to the society of those personal and literary friends in London, particularly Dr GARTHSHORE and Sir JOSEPH BANKS, with whom, in every situation, he continued to maintain an uninterrupted intimacy.

In arranging his specimens of Natural History, Dr WRIGHT had never contented himself with the completion merely of his own collection. His enjoyment was at least as great in supplying such deficiencies as he knew to exist in the collections of his friends; and, on this occasion, as on his former return from the West Indies, his contributions to the Royal Gardens at Kew, and to the collections of Sir JOSEPH BANKS, and other scientific friends, were valuable and extensive.

During his stay in London, he opened a correspondence with his nephew, who was at that time engaged in his medical studies at the University of Edinburgh. It continued without interruption until the untimely death of this excellent young man, in the year 1794. Dr WRIGHT's letters to his nephew have not been preserved; but his amiable cha-

racter, his liberal disposition, and enlightened views, are strongly reflected in the interesting volume of letters, which, during these eight years, were addressed to him by his youthful correspondent.

Early in the spring of 1786, Dr WRIGHT proceeded northward. He arrived in Edinburgh in the month of March, and the greater part of the following summer he devoted to his friends in Perthshire. In the autumn of this year, a vacancy occurred in the Botanical Chair of the University of Edinburgh, by the death of his friend Dr HOPE. On his arrival in Edinburgh some time afterwards, from a tour, he was surprised to find that the zeal of several of his friends had induced them to put him in nomination as a candidate for the vacant chair, from the general knowledge they possessed of his distinguished attainments in this department of science, and from the perseverance with which he was known to have pursued the study of botany in the New World as well as in the Old. But as soon as he found that his friend Dr RUTHERFORD had also been put in nomination, he at once resolved to forego all pretensions to the appointment. By this promptitude of purpose, he not only avoided the evils of a contested election, but secured a basis of general good will, on which many valuable friendships were raised during his subsequent residence in Edinburgh.

Dr WRIGHT had long maintained a correspondence, on literary and scientific subjects, with individual members of the American Philosophical Socie-

ty, and several of his papers had appeared in successive volumes of their Transactions, published at Philadelphia; but it was not until the year 1786 that he was formally elected a member, his diploma bearing the signature of Dr FRANKLIN, the President of the Society, and several other individuals, distinguished for their efforts in the cause of independence.

About this period, Dr WRIGHT appears to have formed the resolution of withdrawing from the more laborious duties of his profession. The fortune which he had earned during his first residence in Jamaica, and which he had at length been able to realize, he believed to be sufficient for all his wants. He resolved to establish himself in Edinburgh, where, in that retirement from the cares of the world, which so many propose to themselves as the chief object of pursuit, he could find the books, the society and the leisure, which his tastes and his habits had so well qualified him to enjoy. But, however desirable in prospect, something more is necessary to the enjoyment of life, than the mere immunity from application to professional employments. To a mind like that of Dr WRIGHT, naturally vigorous, and habitually active, some definite object must be combined with the *otium cum dignitate* of literary retirement. Such an object he happily found in the superintendence of the education of his nephew; and when the extent of his correspondence is taken into view, it is clear that no one was ever less prone to indulge in ennui, or less in danger of suffering from listlessness

or inactivity. Some idea may be formed of the diligence with which he applied himself to literary pursuits, from a simple enumeration of his correspondents. A list has been preserved of them, arranged in alphabetical order. It extends to the extraordinary number of two hundred and sixty, and comprises the greatest names in literature and science in every quarter of the globe.

In the month of November 1787, Dr WRIGHT received such a communication from the Secretary at War, proposing his return to the Service, as induced him to go to London, for the purpose of ascertaining the rank and employment which it was proposed to assign to him. He undertook the journey with the resolution of declining the medical charge of a regiment. Such an appointment was offered him; but after several interviews with Mr Surgeon-General ADAIR, and the Secretary at War, he preserved his resolution, and, after a short visit to Odiham, and a few weeks' stay among his friends in London, he returned to Edinburgh, without engaging in the service.

It is probable that Dr WRIGHT would never have entertained the proposal, but for a circumstance which reflects the highest credit on all the parties concerned in it. Soon after his second return from Jamaica, he invested the greater part of his fortune in the hands of a gentleman, at that time engaged in mercantile pursuits, without exacting any other security than the personal obligation of the borrower. About this period, and for some years afterwards, Dr WRIGHT had

reason to apprehend a serious deficiency in his friend's resources; but his fears were ultimately disappointed by the exemplary good faith of the party. The only point of difference between them, consisted in a race of disinterestedness and liberality. By the debtor's mode of accounting, a considerable arrear of interest arose to Dr WRIGHT, while, by his own calculation, the whole debt was extinguished. The point at issue, in this friendly dispute, was finally adjusted by the purchase of an equivalent, in the form of a piece of plate, which was marked with an inscription, to commemorate the sense which was entertained of Dr WRIGHT's disinterestedness, and of the mutual respect which the parties preserved for each other.

The literary distinctions conferred on Dr WRIGHT in the year 1788 were his election as Fellow of the Royal Society of Edinburgh, and his admission as a member of the Society of Natural History and the Royal Physical Society of that city.

In the year 1789 Dr WRIGHT found the studies of his nephew so far advanced as to qualify him for a very interesting appointment of a temporary nature. Mr STANLEY, a friend of Sir JOSEPH BANKS, proposed to follow the footsteps of that distinguished naturalist, in exploring the volcanic territories of Iceland, and in examining the phenomena attending the boiling and exploding springs, for which that island is so remarkable. Mr STANLEY was to be attended by a number of scientific individuals; and Dr WRIGHT had sufficient influence to get his nephew attached to the expedition, in the capacity of surgeon and naturalist, an ap-

pointment for which he was eminently qualified by the nature of the studies he had been pursuing under the fostering care of his uncle.

A very interesting account of the boiling fountains of Geyzer and Rykum, was communicated by Mr STANLEY to the Royal Society of Edinburgh in the year 1791, and, with an analysis of the waters by Dr BLACK, appears among the papers of the physical class in the third volume of the Society's Transactions. The party embarked at Leith, in Mr STANLEY'S yacht, on the 23d of May; and, after touching at the Faro, Shetland, and Orkney Islands, arrived in Edinburgh, on their return, in the month of November 1789. Writing soon afterwards to his brother, Dr WRIGHT observes, that "JAMES has completed his journal, and given the copy to Mr STANLEY, with specimens of every thing collected. I am happy to acquaint you that he has acquitted himself to the entire satisfaction of that gentleman, with advantage to himself, and information, as well as benefit, to the public."

Having established himself in a house in the new town of Edinburgh, Dr WRIGHT began to lay the foundation of that valuable library, which, in the subsequent years of his life, contained almost all that was rare and curious in his favourite departments of study. His time was also a good deal occupied by the guardianship of several young gentlemen who had been sent to Edinburgh to enjoy the advantage of his advice in the progress of their education; and his nephew, who was now in his twentieth year, with a becoming spirit of independence, began to be impatient

of a routine of study, too slow for his attainments, and was urgent with his uncle to procure him an appointment on some foreign station. The surgeoncy of one of the forts of the Hudson's Bay Company was about this time offered to Mr WRIGHT, and he was desirous of accepting it, from the opportunity it would afford him of exploring a new field in the study of natural history, for which his uncle had inspired him with a decided predilection. But this, and several other suggestions, were discouraged by Dr WRIGHT, from the idea he had formed, that his nephew's talents, and his own influence, would in due time secure a more suitable appointment.

Towards the end of the year 1790, Mr JAMES WRIGHT proceeded to London, charged with the strongest letters of recommendation from his uncle and his other friends, with a view to an appointment in the service of the East India Company; but, to the surprise of all parties, within a few days after his arrival in the metropolis, he was enabled to announce to his friends in Scotland, that his desires had been anticipated, in the most gratifying manner, by his friend Mr STANLEY. In a letter of the 24th December 1790, Dr WRIGHT communicates the appointment to his brother in the following terms. "The favourable accounts from JAMES are farther confirmed by his letter of the 20th instant, received yesterday. He is appointed for Madras, and owes it entirely to Mr STANLEY. Our obligations are none the less on that account to those friends who were kindly exerting themselves on his behalf. The next steps are his outfit,

his passage, and his introduction in India. The two first I shall endeavour to manage. I know his heart is good and grateful. He needs only to be put in the way to prove it both to you and myself. In India, and particularly in Madras, I happen to have a number of friends, who wish for an opportunity to serve and oblige me. JAMES is well satisfied with his destination, as it is the healthiest in India, and desires me to say so to you all, for your comfort. He says, too, 'I am singularly fortunate in being thus early appointed, when others have waited two years without even now succeeding.' "

It may be interesting to notice the fate of a previous unsuccessful application to the minister. It is communicated by Mr WRIGHT to his uncle in the following terms: "I dined *en famille* with Dr GARTHSHORE, on Thursday, where I found your welcome letter of the 6th, enclosing Mr DRUMMOND's to Mr DUNDAS. I went instantly to Professor BRUCE, but he dined abroad. I then went to the Royal Society, in the hope of finding him there, but he did not appear. As I was determined to lose no time in seeing him, I called at his house before 9 o'clock yesterday morning. He dispatched me immediately to Mr DUNDAS's residence in Somerset House, but he was not at home. The porter desired me to call at the Board of Control, in Whitehall, at half-past twelve; which I did, and waited there till four, before I could procure an audience; there being such a crowd of things called Lords and Courtiers, dancing attendance on the same errand! After reading the letter, he said

it was extremely unfortunate that I did not apply a fortnight sooner, as he is afraid I am now too late; he being engaged for every appointment of that kind in his power. He said he was very sorry for it, as there was no person he would sooner serve than Mr DRUMMOND*. He desired me to write him so, and inform him that he would still try what could be done, though he had little hopes of succeeding this season. He desired me also to leave my address, which I did. From his mode of speaking I am sure Mr DRUMMOND's letter was written in very strong terms, and I beg you to offer him my grateful acknowledgments."

Writing to his brother, on the 17th of February 1791, Dr WRIGHT says: "My last letter from JEMMY, was dated from London on Saturday last; and I think he is hardly yet embarked. So far he has succeeded to his utmost wish, in a line the most honourable and respectable. It would grieve him to know that his mother repined at his good fortune. I parted with you all at his age, under every disadvantage, in money and prospects. How different his case! He has had a finished education, an outfit equal to any, and has been introduced to, and patronized by, the companions of the Sovereign. More could scarcely be desired. Let us then be contented and thankful, for thus ushering him so auspiciously into the great theatre of life. I have not a single doubt of his acting his part with honour, and returning with afflu-

* Afterwards Lord PERTH.

ence. A good heart makes him full of gratitude; and I am confident he will be kind to his relations."

Such is the kind and considerate manner in which the balm of consolation is offered to an afflicted father, and to the more sensitive apprehensions of a doting mother, at parting, perhaps for ever, in the bloom of manhood, with an only son. Soon after his arrival at Fort St George, Mr WRIGHT was appointed Surgeon to the 23d Battalion of Native Infantry. He had the fortune to be engaged with the combined army from the different presidencies under Lord CORNWALLIS, in storming the lines of TIPPOO SULTAN before the walls of Seringapatam; and his services on that occasion produced an offer from Colonel BAIRD, then in the command of the 71st, of a vacancy which had occurred in the office of assistant-surgeon to his regiment. But Mr WRIGHT was obliged to forego the flattering prospect of promotion in the British service, which the proposal of Sir DAVID BAIRD had afforded him, in consequence of the necessity which arose for making a pecuniary arrangement with the surgeon of the regiment, to which, at such a distance from Europe, his finances were unfortunately unequal. A few months after this period, when Mr WRIGHT was in the immediate prospect of an appointment as botanist to the Honourable Company, a situation for which he was eminently qualified *, he was suddenly

* In Mr WRIGHT's letters to his uncle, on the occasion of his application for this appointment, he makes many grateful acknowledgments of the unwearied exertions which were made on his behalf

cut off by a bilious fever, at the early age of twenty-four. The tributes of respect which were paid to his memory, evince the strong feeling which his death had excited among his brother officers; and several of the poetical effusions transmitted to Dr WRIGHT on the occasion, discover taste as well as genius of no ordinary kind *. His illness had only been of eight days' duration, but it had not overtaken him unprepared for the event. On the supposition of his having died intestate, a Court of Inquiry was appointed to arrange the affairs of the deceased, and make an inventory of his effects. But the court was anticipated in this melancholy duty, by the arrangements which Mr WRIGHT had himself directed to be made. In the short and comprehensive terms of a military codicil, he named two brother officers his executors, and bequeathed his whole property to his uncle; whom failing, to his parents; whom failing, to his sisters, in equal proportions; thus leaving, at his death, a lesson of that propriety and prudence for which his short but interesting and instructive life had been a steady example.

If, with some imaginative persons, we could believe in the possibility of being visited with a preternatural presentiment of approaching dissolution, the idea would seem to be corroborated by the terms of a letter, addressed to Dr WRIGHT, and found in his ne-

by his friend Dr ANDREW BERRIE, at that time stationed at Fort St George.

* See Scottish Register for 1794.

phew's repositories after his death. It had been written by Mr WRIGHT some time before the accession of the fever which terminated so fatally, when in the uninterrupted enjoyment of perfect health. He disclaims, indeed, the fear of any untoward accident, or even an ominous "foreboding," of his approaching fate; but the intensity of feeling he evinces in the concluding passages of the letter, and the minute attention which he pays to subordinate arrangements, would, with some, be held to indicate the presence of an undefined and lurking apprehension, which the writer himself was unwilling to acknowledge, or, perhaps, unable to explain. The codicil was found in one of the repositories of the deceased; and, beside it, a packet, inscribed

"*To him who opens the box.*

"DEAR SIR,

"Whoever you are that opens this box, and will send the inclosed letter and parcel, as directed, will do a thing which I had very much at heart, when I was such as you are.

(Signed) "JAMES WRIGHT."

The letter to Dr WRIGHT is thus expressed:

"MY DEAR UNCLE, *Altore*, 19*th June* 1793.

"In two or three days this corps marches to Cuddalore, in order to join the army assembling for the attack of Pondicherry. As the French are putting that place in as strong a state of defence as possible, it is supposed the siege will be a pretty hard one, without, however, any doubt being entertained of its falling at last, the force intended to proceed

against it being very strong. Though I have no foreboding or fear of any untoward accident happening to me individually, yet, on the other hand, as I will be as much exposed as the rest, and having no charm about me to keep off a cannon ball more than others, I have thought it proper, for my own peace of mind, and in justice to you, to whom I owe so much, to prepare for the worst, by leaving my little affairs without any confusion; so that, should I meet my fate in this approaching business, the amount of what I am worth may be transmitted to you with as little delay as possible. This, I am very sure, will be done by the two gentlemen I have left my executors, with that honour and integrity for which they have always been known.

" It is needless to desire your kind and generous nature to cherish my parents and sisters after my death. I would beg you to console them; but you, my Dearest Uncle, will want consolation yourself. I am unable to proceed. God Almighty bless and comfort you all.

(Signed) " JAMES WRIGHT."

" *P. S.*—My voyage to Iceland, and a few other papers, I have directed to be sent to you."

Dr WRIGHT had become a Fellow of the Royal College of Physicians of Edinburgh in 1782, and for many years took an active interest in its concerns. Preparatory to the republication of their Pharmacopæia, in 1792, he was enabled, by his extensive correspondence, as well as from the fruits of his own experience and skill, to contribute very materially to the improvement and simplification of that department of the art. The records, indeed, of all the public institutions with which he was connected, afford the fullest evidence of the efficiency and steadiness of his exertions in the

cause of literature and science,—a cause which at all times he took great delight in promoting, by the establishment of a good understanding among literary men; and by strengthening the learned societies to which he belonged, by the accession of some of the greatest names of the age.

On the 24th of January 1792, he writes to his friend Dr GARTHSHORE as follows: "I have now to congratulate you on your election as a member of our Royal Society, which happened at a full meeting yesterday, and was unanimous. As it is not customary for the Society to intimate this to the newly elected members, I thought it best to write a few lines to Sir JOSEPH BANKS and Dr SAUNDERS, on the occasion of their election. I got Dr RUTHERFORD to propose Dr SAUNDERS, and Dr BLACK to propose Sir JOSEPH; Dr GREGORY, in the absence of Dr MONRO, proposed you, and I gave my support."

On the 16th of March 1792 he again writes to Dr GARTHSHORE: "I was duly favoured with your and Dr PEARSON'S obliging note, which has been given to the Committee for our Pharmacopæia, and will be literally adopted as a formula for Pulvis antimonialis.

"I have not neglected the other affair you and I have so much at heart. Our President has entered warmly into the business, and has sounded the different members of the Council, who are all very friendly. One of our laws expressly excludes any British physician from being an honorary fellow of our College. But the way I have proposed is to elect Sir

GEORGE BAKER, as a baronet and philosopher of high rank. Dr DUNCAN has just been with me, and is to call a meeting of the Council for to-morrow; and of the whole College, if the deliberations are to our purpose. As matters stand, I have great hopes that a singular compliment will be paid to this distinguished and worthy individual."

He again writes to Dr GARTHSHORE on the 18th: "I have great pleasure in announcing to you that yesterday, at a full Meeting of the Royal College of Physicians, your worthy and learned friend Sir GEORGE BAKER was unanimously elected an honorary fellow in room of JOHN, Earl of BUTE, deceased. Sir WILLIAM FORBES, Dr MONRO, Dr GREGORY, and Dr DUNCAN, took the most active part. Dr GREGORY, our secretary, acquaints Sir GEORGE of his election, and I beg to congratulate him and you on our success. I have one more feather to offer. If acceptable to Sir GEORGE, I shall have him proposed as a Fellow of the Royal Society of Edinburgh."

The idea had now for some time been entertained of raising the necessary funds, by subscription, for rebuilding the University of Edinburgh, and Dr WRIGHT engaged in the promotion of the undertaking with his accustomed zeal and activity. The remittances he obtained from his friends in Jamaica were of very considerable amount; but, about this period, it appears that a defalcation arose to the amount of L. 11,000, from the failure of a bank in a more distant settlement, where the money had been deposited.

In the course of his correspondence with his bro-

ther, some light is occasionally thrown on the views which he entertained on political subjects. Such instances, indeed, are of rare occurrence, and appear only to have been excited by some striking public event. For instance, on the 10th of May 1792, he expresses himself as follows: "The Slave Trade Bill has met with an unexpected check in the House of Lords. Ministers must have foreseen this; but, by fine speeches on humanity, keep up their popularity, and retain their places. Prince WILLIAM HENRY was in Jamaica when I was there, and saw the real state the Negroes were in. He seems to have weighed the consequences of abolishing the trade, as fatal to our commerce, ruinous to our islands, destructive to our countrymen, and no way serving the cause of humanity. In Africa, where, if they have no vent for their prisoners or felons, they will butcher them; nay, eat them! Several nations have their teeth filed as sharp as those of dogs; and I have been told it was done to bite and devour their enemies. Such are the cannibals we are making a noise about, while we lose sight of all the tender ties of relationship, colour, country, and christianity. A levelling disposition and spirit of innovation seem very prevalent. A new society has been formed, to get a more equal representation in Parliament. This will give ministers something else to mind than the savage tribes of Guinea. All Europe seems in a ferment; and will probably soon be in arms."

Soon after the date of this letter, Dr WRIGHT paid a visit to his friends in England, and made some stay

in London, having been summoned to attend a Committee of the House of Commons on the subject of the Abolition of the Slave Trade.

On the 16th of August 1792, he says to his friend Dr GARTHSHORE: "This will be handed to you by Mr LAWSON of this place, for whom I beg your good offices with Mr HUNTER and Mr HOME. Mr LAWSON carries with him two saw flies, male and female, for Mr HUNTER, from me. The female, I believe, has not been seen before; and Mr HUNTER will probably let the President examine it." As an illustration of the interest which is taken by naturalists in such subjects, another quotation is offered, from a letter to Dr GARTHSHORE, of the 15th of October: "Mr HOME tells me the female saw fly never reached him. If our friend JONAS purloined the lady for Sir JOSEPH BANKS I am satisfied, and will send the only one I had for myself."

On the 17th of December he again writes to Dr GARTHSHORE: "Mr ARCHIBALD ALISON, brother-in-law of Dr GREGORY, and author of an essay on Taste, is a candidate for a fellowship in the Royal Society of London. I am greatly interested in his success, and I trust you will take care of his election. Dr GREGORY was foremost in the interest of Sir GEORGE BAKER *here*."

On the 15th of February 1793, Dr WRIGHT again addresses Dr GARTHSHORE as follows: "Mr LINDSAY of Westmoreland, Jamaica, has made several communications to the Royal Society of Edinburgh: and two of them, on the *Quassia polygama*, and the

Cinchona brachycarpa, are in the hands of the printer. At the desire of the Society, and with the author's permission, I have put them in proper order, and prepared them for the press. As soon as the plates are finished, I shall send you copies for Sir JOSEPH BANKS, Dr PULTENEY, and Dr WOODVILLE.

" You may say to Dr WOODVILLE that I now send him specimens of the *Quassia excelsa* of SWARTZ and LINDSAY (my *Pierania amara*, London Medical Journal); also some of the *Cortex Cascarillæ*, gathered by myself. Tell him he has copied the errors of LINNÆUS and others on this point; and that he will see a fine specimen of mine of the true plant at Sir JOSEPH'S, as *Croton Eleutheria*. I have a notion, too, that the leaf of his *Quassia amara* is also a mistake, and that LINNÆUS took the leaves of the *Sapindus saponarius* for the other. This, too, Sir JOSEPH BANKS will clear up. Dr WOODVILLE will probably rectify any mistakes at the close of the work, and make some additions from MURRAY'S last volume.

" You may acquaint our friend Dr PULTENEY, that I got Drs RUTHERFORD and MONRO to make and second the motion for his election, which was unanimous; and which, I hope, will not be the less agreeable to him, because unsolicited on his part."

" The Trismus infantum," he again writes on the 7th of May, " locked jaw, or jaw falling of new-born children, is rife and fatal in Jamaica, and, in some instances, cannot be accounted for. It was very common for a Negro man to prepare a small inner apartment for his wife, previous to her lying-in; besides

shutting up, and plastering every crevice, the closet was heated, and kept hot with a fire of wood. The usual consequence was a puerperal fever to the mother, and frequently the child was carried off by this cruel disorder. At times I was of opinion that the improper mode of treating the umbilical cord might be the cause; at others, the omission to purge off the meconium in proper time. I have seen these accidents occur, from keeping the infant too hot with body clothes and bed-clothes in that burning climate; and I have known it happen when none of these causes existed.

"Some years before I left Jamaica, I introduced a material change in the treatment of pregnant women. I had a lying-in ward prepared, which was kept clean, airy, and commodious; with black nurses and midwives, properly instructed. The pregnant woman went about, and did some easy work, till the last day of her reckoning; and this practice is now universal in that island. By this means, few women die of puerperal fever; and the proportion of children that die of locked jaw is small, in comparison with the numbers of former times. The women, too, by gentle exercise, have seldom those difficult and preternatural labours, which often happen to ladies of rank and fashion, and to those in inferior ranks who follow the pernicious example, by giving themselves up to sloth and idleness during the period of pregnancy.

"The locked jaw happens before the ninth day after birth, and often without any notice or warning of its approach. In a few cases, where the infant seemed

griped, and not inclined to suck, as usual; where it started, and was somewhat convulsed, I suspected tetanus was forming. In such situations, I removed occasional causes, and immediately emptied the stomach, by *Vinum antimoniale*, and the bowels by a smart injection. I ordered one grain calomel, in a tea spoon, with syrup; and, if it did not operate, by stool, in three hours, a repetition of the dose. This often succeeded; and, as I thought, *prevented* the locked jaw.

"But, when the disorder was once formed, I never saw it cured, except in one instance. The Negress was my own; and, with her consent, I plunged her infant in cold water. It grew as stiff as a board. A Mulatto lady rubbed it till it became warm and flexible. The child had no more tetanus. The Mulatto lady took the merit of the cure!"

"I have conversed with several gentlemen from the Windward Islands on this subject. Some allege they have succeeded by the application of a poultice of powdered bark to the umbilical region; and, of late, I have heard a report, that a drop or two of the oleum terebinthinæ to the navel itself is a sovereign cure; but upon what principle I cannot conceive."

On the 15th of March 1794, he again writes to Dr GARTHSHORE:—"Sir JOSEPH BANKS'S splendid present has arrived. I send you by Mr SETON a letter for the Baronet, with a rare Iceland specimen; and 'The profitable Arte of Gardening, Englished by THOMAS HILL, Londoner—imprinted anno 1574,' which I will thank you to deliver."

About this time, in a letter to his brother, he says, —" I am sorry to acquaint you with the death of several friends, viz. Dr COLIN CAMPBELL, of the infectious fever at Guadaloupe, and Sir HENRY MARTIN, Comptroller of the Navy. Mr INNES, formerly Roman Catholic priest at Drummond-Castle, had for some years resided in France; his niece was of the same persuasion, and kept his house. Both of these unhappy persons perished about a month ago by the hands of the executioner."

Soon afterwards he again writes to his brother:— " Your ideas as to the situation of France are very just. Confusion and anarchy reign in the Convention. TALLIEN and BARRERE are in a precarious situation, and will probably share the fate of their predecessors. But the people must at last awake from their delusion, and see the necessity of a head, and a regular government, although that period indeed seems yet far distant. The wretches amongst ourselves rejoice at every disaster, and wish to involve us in similar misery, that they may satiate themselves with blood, and seize on riches which they have neither the talent nor the industry to acquire for themselves. Yesterday I went to the Lawnmarket, and saw ROBERT WATT brought down from the Castle*; I then went to Heriot's Green, where 300 gentlemen volunteers were under arms. There was happily no disturbance. Indeed, every thing was more quietly conducted than at the execution of a common malefactor. I

* WATT had been convicted of high treason.

hope in God that this example may have its due effect with the deluded multitude."

On the 9th of June 1794, he writes to Dr GARTHSHORE:—"I thank you for Dr WOODVILLE's four numbers; the engravings are executed with all the neatness and elegance which characterized the former work. I observe he has taken the earliest opportunity of inserting the tree which produces the true *Cortex Cascarillæ*, or *Eleutheria*. You may say to him that Sir JOSEPH BANKS, as well as myself, made it a *Croton*. SWARTZ, in his Prodromus, is of the same opinion. The circumstance of its being *polygamous*, militates but little against this idea. The last Quassia I sent you is polygamous, although the genus *Quassia* belongs to the class *Decandria* of LINNÆUS. Very lately I got a small parcel of Conessi bark from Dr ROXBURGH at Madras. The tree is the Nerium antidysentericum of LINNÆUS, and you will find an account of its uses in medicine in the Edinburgh Medical Essays, and in Murray's Apparatus Medicaminum. If Dr WOODVILLE takes notice of it, he may see a specimen of the plant at the President's; and I shall take the first opportunity of sending a little of the bark to give him."

On the 20th of May 1795, he again writes to Dr GARTHSHORE:—"Messrs VEGHT, SCHMISSAR and WATTENBACH called to take leave. I have shewn these foreigners every civility and attention in my power, and they have left me well pleased. Mr SCHMISSAR gave me the first volume of his System of Mineralogy. If Dr CRICHTON does not get the

second from the author, you will be so good as buy it for me.

"Mr JOHN BELL's work on Wounds is in the press. That part which treats of gunshot wounds I have now by me to revise and correct, having seen many accidents of this sort."

Up to this period Dr WRIGHT had continued to reside in Edinburgh during the winter months. On the appointment of a medical staff for North Britain, in 1795, Sir JOSEPH BANKS, Sir GEORGE BAKER, and Dr GARTHSHORE, combined their influence and exertions to get their friend placed upon it, but without success; and as the security on which he had invested the greater part of his property was still in a precarious and unsatisfactory condition, he was induced to accede to a proposal which was then made to him, to accompany Sir RALPH ABERCROMBIE, as physician to a considerable armament, about to be despatched for the protection of our West India possessions.

On the 25th of August 1795, he writes to Dr GARTHSHORE as follows:—"I had the honour of your letter by Mr KIRWAN, who has been here for a fortnight. He is so well pleased with the country, and the attention he has met with, that he is resolved to return to Scotland next year. Dr BLACK and Dr RUTHERFORD have been much with him; I have seen him as often as I could, and gave him a share of any fossils I had.

"I am also favoured with yours of the 22d cur-

rent; and as you and my excellent friend have interested yourselves to procure for me so respectable an appointment, I shall accept it cheerfully. I trust, however, that I shall not be called on for examination before the London College of Physicians, in order to be licensed. If my military services, my fellowships in the Royal College of Physicians of Edinburgh and of the Royal Society, and my character as an author, be not sufficient, I must be excused if I decline the tender now made me.

"In the mean time, I shall be making the necessary preparations, that I may be ready at the shortest notice."

Soon after this period, Dr WRIGHT was induced to proceed to London; but on his arrival there, he found that his appointment was to be strenuously opposed by the London College of Physicians, as an encroachment on the exclusive privileges which were claimed for the licentiates of that corporation. Dr WRIGHT was intimately acquainted with many of the leading members of the College; but such is the influence of that *esprit de corps* by which such bodies are governed, that his ultimate success in resisting the right of exclusion, is not to be ascribed in any measure to the intimacy which he enjoyed with Sir GEORGE BAKER, and several other individuals of the highest influence in the body; but solely to the force of his own high character, to the firmness and intelligence of the distinguished Commander of the armament, and to the liberal and enlightened views of the

Secretary at War*. But the opposition which he met with from the London College of Physicians in its corporate capacity, was never allowed to disturb the harmony of private friendship. A line of distinc-

* Dr WELLS, in his celebrated letter to Lord KENYON, since republished with his own Autobiography, and, with his Essays on Vision and on Dew, (London, 8vo, 1818,) gives the following account of Dr WRIGHT's appointment:—

"Suspicions having arisen in the beginning of the present war, that the dreadful mortality of our troops in the West Indies had, in part at least, been owing to their want of proper medical aid, it necessarily became an object of great national concern, that the immense armament which was preparing in 1795 to be sent to these countries under the command of Sir RALPH ABERCROMBIE, should be provided with able physicians. In this state of things, Dr WILLIAM WRIGHT of Edinburgh was mentioned to a person in power as being well acquainted with the diseases of the West Indies; in consequence of which a gentleman connected with administration, authorized a common friend to make him the offer of being a physician to the armament. Having signified his willingness to accept this appointment, he was desired to remain in Edinburgh until his services should be required.

"It is proper to say somewhat here concerning the fitness of Dr WRIGHT for the situation to which he was designed. *He was a Fellow of the College of Physicians of Edinburgh*, and had formerly served his Majesty seventeen years, chiefly in the West Indies. He had, besides, practised medicine in Jamaica, while unconnected with the army, for thirteen years, during great part of which time he was physician-general to the militia of the island. His talents had not in the mean while been confined to the cultivation of the practical part of his profession. Having included natural history among the objects of his study, he had, during his residence in Jamaica, explored almost the whole of it, in his attempts to extend the limits of that science, and had in consequence made many im-

tion was anxiously drawn between the rights of the body, and the individual feelings of its members, from many of whom he received the most flattering marks of attention, and such recommendatory letters to Sir

portant discoveries of plants, some of which had been published in the Philosophical Transactions of London and Edinburgh, and various other works. By these means he had become well known to many of the learned in different parts of the world, and had been admitted a member of the Royal Societies of London and Edinburgh, and several other bodies of literary men. In short, if private worth, patient industry, diversified knowledge, great general skill in medicine, and long experience of those diseases in particular which attack Europeans in the West Indies, were qualities to be desired in a physician to his Majesty's forces there, the fitness of Dr WRIGHT to be one was most eminent.

" To return to my narrative: in September, Dr WRIGHT came to London, expecting to receive the promised appointment immediately upon his arrival; but he was told at the Army Medical Board, that, by a rule of Sir LUCAS PEPYS, it could not be given to him *unless he had a license to practise medicine from the College of Physicians of London.* He declared his readiness to submit to the forms necessary for obtaining one, but these could not be completed before the end of December, and the armament it was intended he should accompany was almost on the point of sailing. Sir LUCAS PEPYS was therefore strongly urged by several persons to suspend his rule; among others, by two of his own friends, who told him that Dr WRIGHT would certainly be appointed whether he recommended him or not. His answer was, *He would never recommend Dr WRIGHT, and he was sure the King would not sign his commission.* But it was quickly seen that he had grossly overrated his consequence. It was indeed not to be supposed that a rule of a court physician, whose connexion with the army had commenced only a year or two before, by his being placed at once at the head of its medical department, would long prevent the execution

RALPH ABERCROMBIE, as laid a favourable foundation for his subsequent intimacy with that able commander.

The fleet prepared for the embarkation of the armament, amounting altogether to 300 sail, was appointed to rendezvous at Portsmouth, which enabled Dr WRIGHT to pay a short visit to his friends in Hampshire; but on his joining the fleet, his professional duties required his constant attendance on board the hospital ship. They set sail, with a fair wind, on the 15th of November; but were scarcely four and twenty hours at sea, when a violent storm arose, which dispersed the fleet, and compelled them to run for shelter to the various harbours of the Channel. The ship in which Dr WRIGHT had embarked, reached St Helen's Roads in safety, on the 17th of November; but such was the severity of the tempest, that the adjacent coasts were covered with the wrecks of merchantmen and transports; and the loss of lives connected with the armament alone amounted to 600 in number. In a letter to his brother from St Helen's Roads, on the 20th of November, Dr WRIGHT observes: "It will be a fortnight before we can be ready for sea again, as it will be necessary to refit. Our situation was rather uncomfortable, but I know too much of the Channel service to apprehend any serious

of a measure deemed by the ablest judges highly beneficial to the military service of our country. In October, by the influence chiefly of Sir RALPH ABERCROMBIE, Dr WRIGHT was appointed a physician to the armament, and shortly after went with it to the West Indies."

danger in a stout well-manned ship. I have with me a Surgeon-General, Apothecary-General, a Medical-Purveyor, and three hospital mates. All these assist me in the management of the sick sent from the transports.

" The last letters from Mr COLMAN, state the amount of my dear JAMES's estate to be at most L. 350; but this is independent of the Pondicherry prize-money. Before embarking, I had arranged all my affairs: need I say, that every thing I possess is destined for you and your family."

From Spithead he writes to Dr GARTHSHORE, on the 26th of November: " You ask me how early I got the first hint of using *calomel?* It was ever a happiness to me, that I enjoyed the friendship of the late Dr LIND, and was conversant with his writings. In his work on the diseases of warm climates, he takes notice of the East India practice of giving mercury in inflammations of the liver, and of the late Sir JOHN ELLIOTT treating patients with visceral obstructions successfully by means of mercurial medicines. All this I knew so early as 1760; but it was only in 1764 that I began to give calomel in so free a manner as I have done ever since, not only in hepatitis or splenitis, but in all the other acute diseases I have treated of. It was from reasoning in my own mind, and from analogy, that I adopted the practice, and I have never had cause to repent it.

" I never saw any thing of Dr CRAWFORD's Treatise on the Liver, except what I read in the Monthly Review, about the year 1773. I am glad to observe

that his brother is engaged in a work which promises to be so useful to mankind."

On the 8th of December he again writes to Dr GARTHSHORE: "The wind still keeps westerly, and gives me another opportunity of writing to you. The General and Admiral are embarked, and we shall sail with the first change of wind.

"On the 6th current, I received a polite and friendly letter from Dr JOHN CRAWFORD, giving me a sketch of his intended publication, and some practical hints for regimen, and the cure of diseases in warm climates. I beg you to return him my best thanks for the pains he has taken; and say that I shall adopt his ideas, as far as circumstances will admit. I am aware that the quantity of animal food and fermented liquors, ought to be diminished as Europeans approach the tropics. In an hospital ship, or even in a general hospital, our numbers are fluctuating, and the sick are dieted on what is called the full, middle, and low regimen. Previous to our embarking, a medical board settled the diet of soldiers in health, when in the West Indies, by regulations, of which we have printed copies on board. The plan is very good.

"Since we first embarked at Southampton, I have not been once on shore. I could not with propriety leave the ship, as we have many bad cases constantly sent to us from the fleet. There is no sick-berth allotted to soldiers on board of transports, as in ships of war, nor the same able practitioners to treat them, in the beginning of fevers. The truth is, they have been obliged to take any that offered, and young lads

from behind a counter are made hospital-mates. This class of men are no way like those of your time and mine, when medical men of much information had such appointments.

"Say to Dr CRAWFORD, that any thing in my power will be at his nephew's service; but I see he will act with the army at St Domingo, and not with us."

The fleet again set sail on the 10th of December, and during the whole voyage met with adverse winds and stormy weather. The William and John hospital ship, in which Dr WRIGHT had embarked, was separated from the rest of the fleet on the 21st of December, and they never saw any part of the convoy until their arrival in the West Indies. The fleet sustained many serious losses in the course of the voyage, and the William and John escaped narrowly from shipwreck on the north-west coast of Madeira They got into the Trade winds, however, on the 1st of February, and on the 18th of that month reached Barbadoes in safety. A complete dispersion of the fleet had taken place. Fifty sail had reached the rendezvous before the William and John; but of these, scarcely two had arrived in company, and it was several weeks before any intelligence arrived of the admiral and the commander in chief. Dr WRIGHT landed on the 21st of February, and immediately assumed the charge of one of the hospitals on shore. Many of the transports had been sickly throughout the voyage, which is ascribed to the negligence of the military officers, in neglecting to see that the berths

were kept clean, and in permitting the men under their command to indulge in slovenly and uncleanly habits on ship-board. Typhus or ship-fever continued to rage in the harbour; but the patients were sent on shore as soon as they were seized with it, and Dr WRIGHT did not observe it to spread after reaching the hospital.

"Yesterday," he observes, in writing to Dr GARTHSHORE on the 20th of March, "in one ship I found forty-seven men ill of typhus, and objects for the hospital.

"The medical assistants in transports," he continues, "are in general raw and uninformed. The examination at Surgeons' Hall is no doubt proper in its kind; but every man acting on board a transport, or with detachments of troops, ought to be more of the physician than the surgeon; and surely they ought to be examined by two or more physicians who have crossed the Atlantic, and had experience of tropical diseases."

It was at first intended that the general hospital should be fixed at Barbadoes, where Dr WRIGHT was stationed; but being situated so far to windward, it was afterwards found that a scarcity of transports made that arrangement inconvenient. In the month of April 1796, the head quarters of the armament were moved to St Lucia, and Dr WRIGHT was left in command of all the military hospitals in Barbadoes. At St Lucia, as well as at St Domingo, the mortality among the troops was most appalling. Fluxes and remittents were the prevailing diseases, and at this

time they were peculiarly fatal. The ship or jail fever had been overcome; and Dr WRIGHT observes that he had never seen the yellow fever, and hopes that he never should. After the removal of the troops from Barbadoes, Dr WRIGHT's professional duties became gradually less fatiguing, as the inmates of the various hospitals entrusted to his charge were diminished in number. In a few weeks he was enabled to report, that the whole of the sick in Barbadoes, connected with the armament, were in a state of convalescence. The leisure which he thus acquired, was devoted, with his wonted ardour, to the pursuits of natural history; and a large collection of the productions of the Windward Islands was the result.

In the autumn, however, of 1796 these interesting avocations were interrupted. Sir RALPH ABERCROMBIE had resolved to go home for reinforcements, and, before his departure, he again fixed the head quarters, as well as the general hospital, at Barbadoes; a change which necessarily brought with it a great accession of fatiguing duty to Dr WRIGHT. He describes Barbadoes as the hottest of the West India islands he had ever visited, but observes that all its disadvantages are counterbalanced by its superior dryness and salubrity. The troops, however, had been so greatly reduced in number and efficiency, by disease during their absence from the island, that a descent of the enemy was regarded with the most serious alarm. The shores were in many places open to invasion, and the country, in general, was incapable, from natural causes, of being materially strengthened. The mi-

litia indeed was numerous, but in a miserable state of discipline, and they had never seen a musket fired in anger by an enemy. In such circumstances the return of Sir RALPH ABERCROMBIE was looked for with much anxiety.

The command of the armament had now devolved on General GRAHAM, who, in the month of October, removed the head quarters and the general hospital to Martinique, leaving Dr WRIGHT, as formerly, in charge of the military hospitals of Barbadoes. At this period the number on the sick list was very considerable; but the diseases of tropical regions are, in general, too acute to be of long duration, so that in a short time he was enabled to send a staff surgeon, with twenty hospital-mates, to head quarters.

In reasoning on the subject of the remitting fever, which had been so fatal to the armament, Dr WRIGHT, in a letter to Dr GARTHSHORE of the 5th December 1796, appears to regard it as analogous, or rather identical, with the autumnal fevers and dysenteries of England; and he mentions, in the strongest terms, the advantages which he found to result from the liberal use of calomel in this disorder.

"I must now," he continues, "advert to your last letter, which is a complete analysis of Mr PATERSON'S book on Sea Scurvy, and of Mr DOUGLAS WHYTT'S papers.

"Mr PATERSON'S *Acetum nitrosum* in sea scurvy I believe to be new, and if it answer the purposes of the benevolent author, he deserves the thanks of his country. Hitherto I have been at no loss for a

specific in that formidable distemper, when I could get lime-juice; and I hope every ship in the navy will be supplied with a quantity of these juices in proportion to her rate. It not only arrests the disorder, but positively cures it, provided the sick have a proper diet of rice, oatmeal, portable-soup, and wine. Ships of war, in my time, had no wine laid in for the sick. But as the Commissioners for the Sick and Wounded have now got the sole management, they will not neglect this best of all cordials for sick seamen on shipboard.

"I have carefully perused your extracts from Mr DOUGLAS WHYTT'S papers, but cannot find any thing that merits the name of a discovery. Warm bathing, and anointing with unctuous substances, are as old as CELSUS and HIPPOCRATES, and have been practised, for time immemorial, in febrile disorders as well as in health, by the savages of America and the Negroes of Guinea. On the coast of Africa the palm-oil is daily applied, after bathing, as a protection from cold. In acute feverish disorders, to depend on *glysters* would, in these climates, be a fatal and dangerous practice. If calomel be slow in its operation, he can easily increase the quantity, and experience now shows to what exent it can be given with safety and efficacy. The other means he proposes for a reform in naval practice, were long ago detailed by LIND, MILMAN, TROTTER, BLANE, and others."

Early in January 1797, Sir RALPH ABERCROMBIE arrived in Barbadoes with a reinforcement of troops from England; and soon afterwards expressed

his formal thanks to Dr WRIGHT, for his care of the sick, in general orders.

Soon after Sir RALPH had resumed the command, he ordered 500 sick from St Lucia and Grenada to be removed to Barbadoes, in order to be placed under Dr WRIGHT's superintendence. Part of this number was composed of the sad remains of the 31st Regiment, which had been reduced to a miserable remnant of 100 men, all labouring under the fever and ague of the climate, or the visceral obstructions, jaundice and dropsy, which are its usual consequences. Some were so far reduced before their arrival in Barbadoes, as to die in landing on the wharf; and many of them survived only a very few days. But such of them as brought any measure of strength, improved rapidly in the dry atmosphere of Barbadoes, and under the excellent management of Dr WRIGHT. The extraordinary mortality of the disease he ascribed to the great fatigue which the troops had undergone; to the excessive heat of a climate loaded with moisture; and, above all, to the baleful miasmata brought to them from the marshes to the windward of their former stations. At the same time he disapproved of the medical treatment which they had hitherto experienced. The use of bark he believed to have been carried to excess. The exhibition of opium had been neglected during the hot fit of the intermittents; and in removing obstructions of the viscera, and obviating the effects of long continued agues, he continued to hold that mild mercurials were attended with the happiest effects.

Whilst the ranks of the armament were thus rapidly extenuated by disease and death, the skill of the medical practitioners was insufficient for the protection of their own number from the ravages of mortality. Five physicians, four surgeons, and twenty hospital mates, had already fallen victims to the climate. Originally, there were eleven physicians on the staff of the armament. Of these five had died, four had returned to England in bad health, and in eighteen months after their arrival in the West Indies, Dr WRIGHT had found himself with only a single coadjutor: So true it is that the cottage and the palace, the patient and the physician, are equally amenable to the visits of mortality.

Sir RALPH ABERCROMBIE, after the conquest of Trinidad, returned again to England in September 1797. Soon afterwards, Dr WRIGHT applied for leave to return. His health had happily remained unimpaired; and in other respects his situation was as favourable as could be consistent with the scene of death and desolation by which he was surrounded. His emoluments appear to have been considerable. He indulged a good deal in exercise on horseback; and after defraying the expences of an establishment, in which there were three men servants, and as many horses, his annual savings amounted to L. 500. That, however, was not a consideration sufficient to counterbalance, in the mind of Dr WRIGHT, the want of that society which in Edinburgh had been his chief source of enjoyment. It was under these circumstances, and before the period had elapsed within which it was possible to receive an answer to his application, that a

general order arrived most opportunely from England, for the reduction of the medical staff on the West India station, which enabled Dr WRIGHT to retire from the service, without subjecting his friends at home to the necessity of incurring any new obligation.

Preparatory to his proposed departure from Barbadoes on this occasion, Dr WRIGHT prepared an official report, for the use of the Army Medical Board, on the subject of the most prevalent diseases among the European troops in the West Indies, and detailing the mode of treatment which had been pursued in the various hospitals under his charge. This report was very favourably received by the gentlemen of the faculty, throughout our West India possessions. It was reprinted in most of the periodical publications of the period, and was soon afterwards translated into several of the continental languages.

Dr WRIGHT embarked at Barbadoes, on the 26th of April 1798, on board the ship Barton for Liverpool, where he arrived early in June, after narrowly escaping capture by Le Tigre French frigate off the coast of Ireland.

At Liverpool, Dr WRIGHT formed a personal acquaintance with Dr CURRIE, for which they had been mutually prepared by their previous publications on professional subjects, and more especially by the similarity of their views, regarding the beneficial effects of the use of water as a remedy in fever, and other diseases. The great work of Dr CURRIE on this subject had appeared only a few months before, most appro-

priately opening with that interesting narrative of the cure which Dr WRIGHT had performed on his own person, in the course of his former voyage from the West Indies, in the month of August 1777.

Although the right of these enlightened individuals to the gratitude of posterity, may be said to rest on the same basis; yet, during the subsequent friendship which subsisted between them, until the lamented death of Dr CURRIE, in the year 1805, no feeling of jealousy ever arose to disturb the sentiments of mutual respect, which they continued to maintain for each other, from the first to the last moment of their acquaintance. On the one hand, the undoubted priority of Dr WRIGHT in the application of cold water to the body in cases of fever, was uniformly and unequivocally admitted by Dr CURRIE, during his lifetime, in every possible form: and on the other, Dr WRIGHT was equally ready to concede the credit to Dr CURRIE, of ascertaining more precisely the rules by which the application of cold to the surface of the body should be regulated, and particularly for the introduction of thermometrical observations into the history of diseases, a practice which had previously been either unknown or neglected.

Soon after Dr WRIGHT had again settled in Edinburgh, a very interesting correspondence arose between him and Dr CURRIE, on professional and miscellaneous subjects, which, had it consisted with the plan of the work, would have been introduced into these pages at greater length. A selection, however, has been made; and by the favour of the accomplished son of

Dr CURRIE, this volume is adorned with several of the letters of that elegant scholar and enlightened physician. Many appropriate tributes have already been paid to Dr CURRIE's memory: the anniversary of his birth is even marked as a white day in the calendar; but a general collection of his correspondence, would afford a monument, *ære perennius*, of his talents, his accomplishments, and his worth. To rear such a structure is a task well fitted for the hand of affection; and Mr WALLACE CURRIE will pardon the respectful suggestion, that the world has long looked to him for its performance.

In the later editions of Dr CURRIE's work, he closes it in the following terms:

"It would not become me to conclude without some notice of Dr WRIGHT, with whose important narrative this publication commences.

"This respectable physician, after having retired from the fatigues of his profession, had his services called for once more by Sir RALPH ABERCROMBIE, and attended the last West Indian expedition of that illustrious and lamented commander, in quality of physician to the army. On his return to Britain he landed at Liverpool in June 1798, and I had then an opportunity of forming not merely an acquaintance, but a friendship, with one to whom, while unknown, I had been so much indebted. I found in Dr WRIGHT an excellent physician and naturalist, who had devoted a long life to the pursuits of science, not in academic bowers, but in situations of toil, difficulty, and danger; who had profited of his ample experience, by constant and unprejudiced observation; who possessed a generous and disinterested temper, and a simplicity of manners worthy of a more virtuous age. From that time

he has resided in Edinburgh, (where he now fills the office of President of the College of Physicians), and I have had the advantage of his regular correspondence, and of his valuable observations. He has been uniformly zealous in promoting my medical pursuits, and to his kindness I owe the acquaintance of Dr Macniel, Dr Robertson, and Mr Macgregor, by whose communications I am so much obliged.

" During his last residence in the West Indies, and while Director of the Military Hospitals in Barbadoes, Dr Wright drew up for the Medical Board in London, a report on the diseases most common among the troops in the West Indies. In speaking of the cure of the ship-fever, he says : ' In the beginning of the ship-fever, the cold bath had the best effects ; and through the day, when the sick were hot, washing the hands and face suddenly in cold water and vinegar, was exceedingly refreshing.' In like manner, in treating of the yellow fever, he remarks, ' In the beginning of the yellow fever, the cold bath succeeded admirably, but in the advanced stage much caution is necessary.' I quote these sentences from a report, the whole of which deserves the most careful attention of military practitioners in warm climates, to shew that the experience of Dr Wright continued to justify his original recommendation of the cold bath in fever, and to justify in particular the mode in which I had recommended it, at a time when my publication was equally unknown to him as his report was to me.

" In a few months after his visit to Liverpool, I received from Dr Wright his remarks on the second edition of the Medical Reports, much at large. In these, after supporting all the principal parts of my treatment of fever and convulsive diseases, from original observations of his own, he concludes by assuring me that my work has his unqualified approbation. In subsequent communications from this venerable physician, he informs me of the success attending his

use of the cold affusion in febrile diseases in Edinburgh, particularly in the late influenza; which he treated as a fever of debility, allowing a liberal diet, and the moderate use of wine, but keeping down heat and flushings, by the sudden application of cold water to the surface; a mode of treatment which he found invariably successful: and he expresses a confident opinion that the cold affusion, well timed, will not only cure all febrile exacerbations, but prevent their taking place, 'I agree,' says Dr WRIGHT 'with Dr FALCONER of Bath, in thinking that the cold affusion will secure persons from taking the plague itself, though exposed to its contagion.'"

After a short stay at Liverpool and Manchester, Dr WRIGHT, towards the end of June 1798, proceeded to London, where he had the satisfaction to find that his services in the West Indies had been duly appreciated. As he was still retained on the full pay of the army, he appears to have felt that his services were more immediately at the disposal of the Secretary at War, than if he had been reduced with the other officers of the Staff. It is probable, however, from his never having afterwards had any actual duty assigned to him, that the delay in placing him on half-pay was only intended to afford him some remuneration for the example he had shewn of zeal, activity, and perseverance in the discharge of his professional duties.

The uncertainty as to his future destination, detained him for several months in London, during which he had an opportunity of cultivating and extending the friendships he had formed in the metropolis. At the Royal College of Physicians, he found that he had risen so high in favour with the corpora-

tion, as to be offered the honorary rank of an extra-licentiate, which, however, he thought fit, under all the circumstances, to decline.

In the month of October 1798, Dr WRIGHT proceeded to Edinburgh, and shortly afterwards to Aberdeen, where the business of a friend required his attention. From Aberdeen he returned to Edinburgh, by way of Perthshire, where he appears to have concluded the year, in the bosom of his brother's family, and surrounded by his early friends.

Upon his arrival in Edinburgh, after obtaining and fitting up a proper residence, his first attention was directed to the arrangement of his books, and the inspection of his numerous dried specimens in botany, and other branches of natural history, which, with his recent additions, had, by this time, amounted to one of the greatest private collections in the kingdom.

While these matters were in progress, Dr WRIGHT, in answer to some inquiries from Dr GARTHSHORE, on the subject of Diabetes, writes to him as follows:

"SPALLANZANI, and the works of JOHN HUNTER, may be consulted with advantage; but in what manner the saccharine process is carried on in the animal economy, is one of the arcana of nature which cannot well be developed, even with the assistance of the new chemistry.

"In the boiling of sugar, I have known some hogsheads spoiled by a mischievous Negro squeezing a few limes or lemons in a sugar-mill. No granulation took place, and the whole was obliged to be sent to the distillery. It was not this circumstance which gave me the hint of treating diabetes.

"Such cases as fell under my inspection were recent, and were either accompanied by remitting fever, or took place in

young children who laboured under lienteria, and an immoderate flow of urine. In either case, my mixture of citric acid and marine salt answered the purpose completely. That such disorders are occasioned first by a morbid secretion in the *primæ viæ* is little doubted, and that such secretion has an assimilating power is evident from the effects. Has the medicine the power of changing the nature of this morbid *ferment?* Or does it give the parts another action? Be that as it may, I have relieved many by this medicine; and, had I restricted my patients entirely to animal food, I might have succeeded also in diabetic cases of long standing. I think I have done good with infusions of Lignum Quassiæ, which is quite the opposite to honey or sugar."

On the 21st of February 1799, Dr WRIGHT thus commences his correspondence with Dr CURRIE:

"MY DEAR DOCTOR,—From the time I left you in June, I was detained four months in England before it was determined to put me on the half pay. For that space I lived sometimes in London, sometimes in Hampshire.

Our friend Dr GARTHSHORE told me he had read your book several times over, and always with new pleasure and information. Till very lately, I could not sit down to examine it with the attention which it merits. From the progress I have made, I see how little you have left me to correct or to add. Any remarks which occur will be speedily forwarded.

"While I staid in London, my friend Mr WEIR, Inspector-General of Hospitals in San Domingo, gave me an original letter from Dr JOHN MITCHELL, physician in Virginia, to Dr FOTHERGILL, London, 1741, referring to a letter he had some time before sent to the Medical Society of Edinburgh, for the Medical Essays. This last I suppose is the

same which Dr Rush speaks of in his book on the fever of Philadelphia. In this letter Dr Mitchell labours to prove that the American fever is the same with the Hungarian or pestilential fever, described by Rulandi and others. The copy I took will be sent you, together with some original papers of mine, recovered from Dr Thomson, formerly Secretary to the Medical Society of London.

' I often hear from Dr Garthshore. A few days ago he inclosed me a long letter from Dr Wells. He tells me that he has prepared to expose the tyranny of the College of Physicians, and the malversation of its members in office. He alludes particularly to the refusal of Sir Lucas Pepys to recommend me, in form, to the Commander-in-Chief, in 1795, and to his giving a preference to raw youths, for no other reason than because they were of Oxford or Cambridge, and might one day or other become members of the College of Physicians of London.

" Dr Wells requests information on this head from me; and I have furnished him with so much of my *life and conversation* as was necessary for his purpose. At the same time, I concur with Dr Gregory in deprecating the measure of his addressing his letter to Lord Kenyon, as it would be arraigning a judge for partiality before the *people*, serious perhaps to the writer, and detrimental to the cause he wishes to support.

" I am now to request what I have no claim to, your forgiveness for a seeming neglect, and a letter from you in the course of post.

" Your Report sells rapidly, and another edition will soon be wanted. Accept my warmest thanks for the honour you have done me. I am proud to be handed down with you to posterity. Make my compliments acceptable to Mrs Currie and the family. I am, with great esteem and respect, my Dear Sir, your faithful friend, and very humble servant,

" William Wright."

Dr CURRIE'S first letter to Dr WRIGHT, is dated the 24th of February 1799. The following are extracts:

"MY DEAR SIR,—I received your obliging letter of the 21st, this morning, and lose no time in assuring you of the satisfaction it has given me. I am very happy to find that you are about to favour me with your observations on my book, on which I will place their just value. The other communications you express your intention of sending, I will receive with pleasure and thankfulness. I am much pleased to see that you are going to entrust me with some of your own original MSS. recovered from the Medical Society of London. I consider every thing from you as of the very first authority. I have some reason to believe, by a message from CADELL and DAVIES, that a new edition of my Reports will be required in a little while; and, on this account, I am the more anxious to receive your packet, with as little delay as convenience will admit.

"I have received from various quarters accounts of the successful use of cold ablution in fever. Strange to say, in the last dreadful fever in Philadelphia, though every other method proved so utterly inefficacious, this was never once tried; but at Boston it was used with the happiest effects. What murderous work they made of it at Philadelphia! My blood runs cold when I think of it.

"I have never the slightest opposition to the affusion of cold water here. It is universally received and admitted among the better classes; and, indeed, among the poor, where their miserable accommodations, of which you will see some account in my book, admit of it.

"I have had five cases of hydrophobia under my care in the last five years, one very lately. I think I have a distincter conception of the nature of the disease than I find in

print, and have thoughts of publishing a memoir on it. I have entirely failed of a cure hitherto, but have some little hopes, if the disease should occur again. My last patient married about a fortnight before he died. He slept with his wife every night till he died. She is pregnant:—a tolerable proof this, that the disease is not communicated by the human subject.

" I am happy to see that you take an active part in the business of the College, especially as a new pharmacopœia is getting ready.

" Dr WELLS is my old school-fellow, fellow-student, and friend; as honest a man as lives, and of very superior talents —but *impracticable*. He wrote to me on the subject of his publication, and I threw out a few hints to him; but I know he will take his own way. There is, however, no danger that he will commit himself rashly. He will not, I dare say, excite any enmity against him but that of the Fellows who support the pitiful system of the College; and that system will find in him an adversary, able, intrepid, and unrelenting. I am glad you gave him the facts respecting yourself. It is not possible to think of their conduct in your case without scorn and indignation.

" Allow me to congratulate you on your returning to the bosom of your country and of your friends. May the remaining part of your life be as tranquil and happy as the past has been active, useful, and honourable!

" Adieu, my dear sir. Your faithful and obliged friend and servant, JA. CURRIE."

On the 12th of March 1799, Dr WRIGHT transmitted to Dr CURRIE a paper of observations on the second edition of his work, in which he details a number of cases occurring in his own practice, which coincided in their results with the views of his correspon-

dent, and served to confirm the doctrines which Dr CURRIE had so ably supported. At the same time, he transmitted to Dr CURRIE those original papers to which he formerly alluded, as having been recovered from the London Medical Society. In the letter accompanying these communications, he observes, "The paper on small-pox will surprize you. We were born, it appears, to think and act alike, in separate hemispheres, and at the distance of thirty years. The coincidence is very striking."

Dr CURRIE, on the 18th of April 1799, thus writes to Dr WRIGHT:

"MY DEAR SIR,—If I have not sooner acknowledged your most valuable and obliging communications, this has arisen from the wish I had to write to you much at large on the several points to which they refer; and such have been my avocations, that hitherto it has not been in my power to find the necessary leisure. Even at the present moment I must, in a great measure, confine myself to an assurance of the safety of the papers, and to a sincere expression of my gratitude for the valuable time you have devoted to my service.

"As yet my booksellers have not signified to me in any other than general terms, that another edition of my book will be required; and perhaps they may be mistaken in supposing it would be called for in the course of the present year. I shall not, however, go again into the press, without availing myself of the communications you have already made me; and you may soon expect a long letter from me on those topics in which we are mutually and more especially interested, with a view to your farther opinions. It shall be my endeavour to point out the coincidence of our experience,

because I am fully sensible how much I shall by that means strengthen the authority, if I may so speak, of the practice I wish to inculcate.

" I have, since I wrote last, had complete success in a case of tetanus. Wine, and bark, and opium had been pushed to the utterinost, and the symptoms were aggravating. I was fearful of using water of the temperature of our air, the weather being then intensely cold; and recollecting the success of your practice in Jamaica, I heated the water employed for affusion to 75°. The effects were most striking. The patient himself afterwards constantly called for this remedy when the spasms under the scrobiculus cordis pressed him, and clearly attributes his recovery to this practice. I mean to print the case, which is an excellent one.

" I have just had a very interesting case of diabetes, to which I have paid minute and constant attention. The patient is for the present well. The particulars, which include some curious phenomena respecting animal heat, I will communicate to you and to the world.

" I write in great haste. Once more accept my best thanks and best wishes. Yours most faithfully, JA. CURRIE."

Throughout the long life of Dr WRIGHT there was never the slightest abatement in the warmth of the affection he maintained for his brother. This feeling is strongly and uniformly evinced, throughout a correspondence which covers a period considerably exceeding half a century in duration, and which suffered only the casual interruptions arising from his occasional residence in his brother's family. A variety of extracts have already been given, and another is now offered, as placing several of the leading features of his character—his kind and considerate disposition—

his habits of method and arrangement, and the application of these habits and dispositions to a useful and interesting purpose, in a prominent point of view.—"It will be my study (he says) to make your situation as comfortable as lies in my power; the rest will depend on yourself. And as you are likely to continue in a business which has not hitherto been productive, I am sure that nothing on your part will be wanting. Let your duty for your family, and your love for me, stimulate you constantly to the strictest attention to your affairs: spend some hours daily in your works: see regular entries made in your books: keep your accounts clear and correct: be not afraid to look narrowly into your private affairs: set down on one side every shilling you owe, and on the other the good or bad debts which may be due to you. This will enable you to go on with pleasure and satisfaction. Above all, adjust your affairs with reference to your family; and as you have heritable property and personal concerns, it is necessary you should have a will made in due form by some friend in the law, to prevent the possibility of future dispute among your children. This is a piece of justice which is due to your family; and your compliance with my request, without loss of time, will be a test of your affection to me. Indeed, when we consider the transitory and uncertain tenure by which life is held, there is no time to lose."—He then discovers the clew which had led to this train of thought, by enumerating a number of deaths which had recently occurred in Edinburgh,

and among others, that of the learned and eccentric Lord MONBODDO.

About this time Dr WRIGHT's correspondence with Dr CURRIE was closely kept up. The latter had now engaged in the work which has since connected his name so inseparably with that of ROBERT BURNS; a circumstance which gives to the following passage a peculiar interest. It is probable from his knowledge of the tastes and habits of Dr WRIGHT, that he did not anticipate much encouragement in that quarter for the prosecution of the undertaking, a feeling which, when combined with the delicate state of Dr CURRIE's health, may have had some influence on the tone of his expression. The letter, from which the extract is taken, is dated the 18th of August 1799:

"I enjoy," he says, "but indifferent health, and write at present in my bed-room. Being much exposed to the late tempestuous weather, I have got a cough, which is teasing. I am compelled to bleed, which makes me languid, especially as I cannot lie by.

"I have unwittingly engaged in a work, from which I expected nothing but amusement and relaxation, but which has consumed some valuable time,—superintending a complete edition of the works of poor BURNS, which is printing here, and now on the eve of publication. This ill-fated genius died in Dumfries, where I saw him, in an excursion I made to Scotland in 1792. His family's great friend, Mr SYME, was an early and particular intimate of mine; and by him I was induced first to engage to give an anonymous article as a preface to the works; afterwards to give my opinion of what MSS. should be printed, and finally to superintend the printing, transact with the booksellers, and, in short, undertake

the management of the publication. At first I expected nothing but amusement. You must know I am a great admirer of Burns, and have a partial attachment to our old interesting country; but it has happened from various causes that this task has occupied and almost engrossed my little leisure from professional pursuits. Thank God it will soon be off my hands.

" I mean to prefix a discourse on the condition and manners of the Scottish peasantry; and I mean also to speak of the effects of opium and alcohol on the temperament of genius. So you see I shall give it a professional colouring. Can you indicate to me any book in which I may find assistance in this last particular?

" I am sensible that I have been imprudent in this undertaking, and that it interrupts me in the pursuit of objects *fairly* in my path and in my view. But I must get through it now as well as I can."

In Dr Wright's next letter to Dr Currie, of the 24th of August 1799, the following passages occur:

" Your welcome and kind letter of the 18th current came duly to hand, and relieved me considerably from the anxiety I had concerning you. I hope a little time and attention on your part will restore you. We all know the ill effects of a sedentary life, while at the same time the mind is making exertions. I rejoice that Burns is now so nearly off your hands, and that you will soon be able to turn your attention to other subjects.

" Crumpe has written best on opium, so far as regards its virtues in diseases, and Trotter De Ebrietate; but I do not at present recollect any author who treats either on alcohol or opium, as it influences the morals or the modes of thinking in mankind. The latter I should suspect might best be

gathered from authors who treat of the history of eastern countries, or of Turkey; but I shall make inquiry if any books are extant expressly on these subjects. Does not DARWIN give some hints? I have not bought that eccentric work the Zoonomia. By the bye, his Loves of the Plants is a modernized paraphrase of DE LA CROIX's Connubia Florum; but he has disfigured his elegant poem, by the introduction of notes on the politics of the day."

In a letter about this period to his friend Dr GARTHSHORE, Dr WRIGHT expresses himself as follows:

"I am very happy to find you persevere in the practice of cold affusion, and that your success continues to confirm my experience. I have just received a letter from Dr JAMES ROBERTSON, at Barbadoes, to whom I had sent Dr CURRIE's book. He has adopted the practice to the full extent, and concludes with observing, 'I have not had a single patient ill of fever for a longer period than two or three days, since I received Dr CURRIE's Reports.'

"I am sorry to say that Dr CURRIE has been ailing for several months. He is able, however, to attend to his literary pursuits; and he tells me that you have made him some valuable communications. He has been drawn in to prepare an edition of BURN's Poems, with a prefatory discourse, in which he is to treat of the effects of alcohol and opium on the minds and morals of the people of Scotland. He requests me to name such authors as have written best on these subjects. Perhaps you can assist him; I cannot.

"We have made some progress with the Pharmacopœia, and have rejected a great number of simples, which we consider useless or obsolete. When we come to the Formulæ, I

mean to request the favour of you and Dr PEARSON to give us your observations and corrections.

"I have been very busy with West India and British Fuci. Of the latter I intend sending an assortment for Dr PULTENEY, and another for the Linnean Society, which I will beg you to present through Dr SMITH. I am also occupied with ascertaining corallines, by the help of SOLANDER and ELLIS. In West India corallines, my collection is complete."

To Dr CURRIE he writes on the 30th of September 1799:

"Dr WELLS's letter to Lord KENYON was handed to me two days ago, in which I observe my case at large. It is elegantly written, but would have pleased me better had it combined more of the *suaviter in modo* with the *fortiter in re*. I suspect that the President and Fellows, and particularly Dr LATHAM and Sir LUCAS, will feel rather sore on the occasion. It does not appear to be published, but the author has no doubt sent you a copy. It is printed by WHITTINGHAM, Dean Street, Fetter-Lane. When you have read it, I shall be glad to have your opinion of its merits."

A variety of interesting topics are discussed in the correspondence about this period between Dr WRIGHT and Dr CURRIE. With the latter, the erection of a fever hospital at Liverpool appears to have long been a favourite object, in the attainment of which he at length succeeded, but not without a great deal of anxiety and exertion. The details of the measure are carefully examined in the course of his correspondence with Dr WRIGHT; but they extend to so great a length, as to be inconsistent with the limited plan

of the present memoir. Another subject is discussed in these letters, in which the inhabitants of Liverpool had a material interest, regarding the quality and analysis of the water, which was about to be introduced into the town by two rival companies; but this it is also necessary to omit.

On the 21st of November 1799, Dr CURRIE thus addresses Dr WRIGHT:

"I hope to enter very particularly with you on medical subjects before long; and I should be stupid, indeed, if I did not endeavour to profit by your power, as well as by your inclination to serve me.

"I have received my friend WELLS's powerful pamphlet, and have read it with emotions of sympathy and of admiration. It is like the man,—in some respects even superior to what I expected. No argument can be put more clearly, nor urged, I think, with more energy. It is impossible but that those against whom it is directed, must wince under the flagellation they have received, which they will neither know how to submit to, nor how to repel. It is not possible but that they must shrink under the chastisement of so superior an adversary, or that they should bear him any other sentiments than those of the most inveterate enmity, springing out of the mixed sensations of fear and hatred.

"I fear my high minded friend has taken a very imprudent step, and I cannot but calculate the consequences to himself as likely to be injurious. Since he has gone so far, I wish, however he would publish his book, to prevent the misrepresentations which will otherwise be affixed to it. I hear the lawyers are highly pleased with it, especially with the part in which he lashes our profession; which, I confess, I thought too severe. It seems to me that he has avoided,

very successfully, the imputation of disrespect to Lord KENYON.

" What think you of the style? I thought it very superior. What he says of you is universally, I find, thought extremely to the purpose, and has occasioned in ——— —— great uneasiness. So I was told by a London lawyer a few days ago. How beautiful is the eulogium on HEBERDEN!

" You must know that WELLS and I were school-fellows, and slept a long time in the same room. I know him of course well; and am deeply interested in him. The man is singularly noble,—brave beyond all sense of fear,—ready to sacrifice his life to serve any generous purpose,—and not capable of a mean or base thing to save his life. He has the corresponding faults,—an unbending pride—unaccommodating manners,—inflexible determination,—a disposition to act solely under the impulse of his own lofty spirit,—and to scorn the consequences, whatever they may be. With all these obstacles to success, such is the strength of his talents, that he would rise to the first rank of society, if the life of man were lengthened to twice or thrice its present duration.

" I wish he could get a professorship in your University. There he would shine; and he could lecture on any branch of science."

The following passages occur in a letter of Dr CURRIE to Dr WRIGHT, of the 29th of November 1799:

" I know not whether I mentioned to you before, that my book has been abridged, and printed in America, in the form of a shilling or eighteen penny pamphlet, which is circulating through all the great towns,—and, I hope, doing some good; but of this I have not yet particular accounts. A copy of this abridgment has been sent to me by the author of it, a Mr PETER EDES of Augusta, in the district of Maine, who seems a man of good understanding, and some information.

He prefaces his abridgment with an account of the practice, so far as it has hitherto been adopted; and of the motives for adopting it universally. The abridgment has gone to a second edition. He speaks very fully of you, and in the proper terms:

"It is a miserable thing to think that, while all their established and common modes of treatment have proved so miserably inefficient, the physicians of America should have been engaged in such fierce and stupid controversies, which have diverted their attention from the awful lessons which experience was presenting to them, in the continued mortality of the fever. Though I sent my book to the Editors of the American Medical Museum, published at New York, they never found time to review it, or even to notice it, being entirely occupied with theoretical disquisitions in support of MITCHELL's gratuitous theory respecting the principle of contagion being the gaseous oxide of azote! an hypothesis created by the imagination; but made the foundation of a system of practice,—consisting of the administration of alkalis and alkaline earths, to correct, forsooth, the prevailing acidity."

About this period, Dr WRIGHT thus writes to Dr GARTHSHORE:

"Mr friend, Dr LIND, desires me to make his acknowledgments to you, for your great attention to him while in London. I proposed him as a Member of our Royal Society, and he has been unanimously elected. I do not know a more enlightened man, or a more judicious physician, than Dr LIND. And, as he has preserved accurate and methodical records of his cases for many years, and reads all the modern publications, he will certainly prove a useful and valuable correspondent to the Medical Society.

"In the Philosophical Magazine, No. 7. I think, an Ame-

rican doctor details the good effects of vegetable acid and sea-salt, in various cases, and styles it 'Dr WRIGHT's Medicine.' In fluxes he thinks it will supersede the use of every other remedy.

"We have had the catarrhal fever very prevalent in this city; and it has proved fatal to some old people worn down by infirmities: I have heard of others who narrowly escaped. The hazard they incurred was probably owing to the unseasonable use of means too active in their operation. On the Continent many have died by bleeding and brisk evacuants. I recommend cordial and volatile medicines, gentle laxatives, and diaphoretics, with wine and a generous regimen to support the strength of the patient.

"Dr HUNTER, the Professor of Divinity, lies dangerously ill. His disorder is said to be an internal inflammation. The old antiphlogistic mode of treatment continues here; of which you know that I do not approve. My modus medendi was, by the use of mercurials, internally by the stomach, and externally by friction, increasing or diminishing the application progressively, as the violence of the symptoms prevailed or abated.

"A number of children have lately died in hooping cough. In several instances it caused an effusion on the brain, and consequently hydrocephalus. Some practitioners here pretend to have cured hydrocephalus, by means of mercury, after double vision, and even blindness, had taken place; but for this they have no credit. I have seen many, but all proved fatal, notwithstanding the use of mercury, digitalis, and other remedies."

Dr WRIGHT devoted the last summer of the century to a tour in the north of Scotland, spending a considerable part of his time among his friends in the counties of Perth and Aberdeen. From the neigh-

bourhood of Callendar, in Menteith, he writes to his friend Dr GARTHSHORE, that he had been detained, on his return to Edinburgh, by the illness of a lady of his acquaintance with fever and sore throat, followed by lienteria; the last of which he removed by his specific of salt and vinegar. In a subsequent letter he says to Dr GARTHSHORE:

"The lady I formerly mentioned to you had that species of sore throat, with white specks and sloughs, small clear ulcers, and scarlet efflorescence. It is well described by PENROSE, in a work published thirty years ago. Before my arrival, as much wine and bark had been poured in as she could swallow. She was hourly getting worse. I gave a favourable turn to the disorder, by the exhibition of three grains of antimonial powder and one grain of calomel, every three hours. The second day brought on a kindly perspiration; the patient had immediate relief; but went on with three more of the powders, to secure what she had got. The gargle was vinegar, water and honey, very gently used.

"In the remitting fever of children," he proceeds, "attended with debility, irritability, and intestinal disorder, when the discharge by stool is lienteric, of a dark green colour, or thin and white, and very fœtid, vinegar saturated with marine salt will never deceive you. It will do every thing. To young infants, say of three months, a tea-spoonful to a table-spoonful of water, well sweetened, will suffice: to a child a year old double the quantity, every three hours.

"Have the goodness to say to Sir JOSEPH, that a book, with the following title, is at his service, "LEONARDUS THEMEISSURUS, Descriptio Plantarum, Ratisbonæ, CICIOLXXVI."

On the 24th of August 1800, Dr CURRIE writes to Dr WRIGHT as follows:

"Having deferred to reply to your kind letter, informing me of your having forwarded the books you had the goodness to procure for me, till they should arrive, of which I was in daily expectation, I let slip the proper opportunity of acknowledging your kindness: and the engagements, of which you have perhaps seen the proofs now before the public, which I had in issuing BURNS into the world, in the last, as in every former stage of the business, consumed a portion of time which I did not previously calculate upon. For, soon after the edition appeared, the booksellers gave me notice to prepare for a second: a notice to which I was not disposed to attend, in consequence of former unfounded notifications of the same kind. However, I am since informed that the whole edition of 2000 copies is gone, and have been obliged to send up a corrected copy, not so much amended as I wished, to put immediately to the press. After all, CADELL and DAVIES, with whatever haste they may work (and I understand they employ three printing presses), will have the mortification, as they say, to have the work six weeks or two months out of print.

"I have had a great many communications from London, &c. on this publication: but, excepting a very kind and good letter from Mr FRASER TYTLER, not a syllable from any friend in Edinburgh, or indeed any where north of Dumfries: so that I am ignorant in a great measure how the Life is received in Scotland. I wish you would tell me if you hear any remarks upon it in Edinburgh: any thing especially which it may behove me to know: for it is not yet too late to make corrections.

"Now that this imprudent task is off my hands, I shall never more rove from my professional studies: never at least till I deliver myself of a considerable number of conceptions, which ought not, as I think, to be stifled in their birth. On the subject of fever, I have much yet to do, and I must do it

in a new volume. I have also something to say on the gout; and on insanity, hydrophobia, and diabetes: but these two last subjects may be discussed in some periodical work; the two former will require a separate publication. When I have done all this, I will rest. I shall have performed my part. I mention these intentions to you, that, should any thing occur, you may suggest it. For, notwithstanding my omissions, the cause of which is removed, I have the confidence to hope for a continuation of your friendship."

It is deeply to be regretted, that, in the subsequent years of Dr CURRIE'S valuable life, he did not enjoy the necessary health or leisure for executing the important tasks which he had thus assigned to himself. With his enlarged and enlightened views, and with a mind so free from prejudice or bias, there can be no doubt of the great accession he would have brought to the knowledge of any subject which he had chosen for investigation. The topics, indeed, were such as required the firm grasp of a master mind; and such was that of Dr CURRIE. For many years after his death, when a case of difficulty or danger occurred, in such cases of gout, insanity, or fever, as fell within the range of Dr CURRIE'S projected publications, Dr WRIGHT was often heard to lament the loss which the world had sustained, by the death of his friend in the midst of his career. Dr WRIGHT'S next letter to Dr CURRIE, contains the following passages.

"I shall rejoice to see any thing of yours on gout and insanity.

"In cases of tradesmen, *who had no time to be sick*, afflicted with gout in the feet and ancles, accompanied by febrile

symptoms, I have prescribed pulvis Jacobi, or pulvis antimonialis, two grains, and one grain of calomel, every three hours, till a perspiration came on; which I kept up for several hours. By this means the fit was warded off; the fever and inflammation disappeared; and in a few days they followed their occupations.

" A gentleman in the West Indies had cephalalgia arthritica to such a height, that I was apprehensive of frenzy or hydrencephalus. I gave him five grains of calomel twice a-day for two successive days, which produced a sudden salivation, and my patient was relieved of headach, and continued free of it for two years. The theory of the day is, that both mercury and camphor dispose nature to reabsorb the morbid and inflammatory affections.

" I have lately had a case of mania furiosa. It was the lady of one of the professors. She is upwards of 50 years of age, tall and well made. She had seemingly a good state of health, and the catamenia about leaving her.

" About the middle of December, she was suddenly seized with frenzy. I accompanied Dr Monro to her residence in the country. We found her so high and ungovernable as to induce the necessity of coercion. She had fever and flushing, with constipation, talking loudly and incessantly. Topical bleedings were adopted, and a blister was applied to the head. Neither vomiting nor perspiration could be brought on by large doses of emetic tartar, and costiveness was with difficulty removed by drastic purgatives, and stimulating injections. Dr Monro recommended small doses of tartar emetic, three times a-day, which were given for three weeks without effect. At last, I determined on giving her camphor, viz. camphoræ 3i, sp. vini 3i, magnesiæ 3i, aquæ comm. ℥xii, sacch. alb. 3i M. A common wine glassful three times a-day. The first dose was administered forcibly through a silver funnel, on the 5th of January. The second dose she took with good will;

and on the same day she requested that a third might be given to her. She was now calm, cool and collected. It was continued twice a-day for a week; since which she continues well. This I think is the fourth case I have cured by camphor; at least I have been so fortunate as to have them recover at the time it was administered.

"Of diabetes I know a little; and several cases, of no long standing, I treated with success, by a method peculiar to myself. It was no other than the citric acid saturated with marine salt. The diabetic cases were recent, attending remittent fever, or its consequences, or took place in children with remitting fever, and great intestinal irritation, occasioning looseness and lienteria. Such bowel complaints as cholera, diarrhœa, lienteria, and dysentery, yield to this simple remedy; and with it I have cured a great number of all ages and conditions. Two physicians in America, Drs PERKINS and B. LYNDE OLIVER, have published an 8vo volume on Dysentery, &c. cured by 'Dr WRIGHT's medicine,' and say it will supersede the use of all others in the cure of fluxes. I am not quite so sanguine: I often find that obstinate dysentery will only yield to calomel."

Dr WRIGHT, in the regular course of rotation, should have assumed the Presidency of the Royal College of Physicians in the year 1800, as successor to his friend Dr GREGORY; but, in consequence of the somewhat animated discussion which was at this time in progress between the Physicians and Surgeons of Edinburgh, Dr GREGORY and Mr BELL, being the champions of the two parties, Dr WRIGHT thought it best to postpone his pretensions, in favour of Dr GREGORY, who had occupied the chair for the two previous years. On the 3d of December 1800 he writes to his brother:

" The election of office-bearers in the College of Physicians, took place this morning. I am of the Council, and might have been President; but as Dr GREGORY has kicked up such a dust with the Surgeons, I thought it best that he should continue in office, and fight his own battle. JOHNNY BELL has answered or rather criticised the Memorial of Dr GREGORY, who is now preparing his reply. I shall take an early opportunity of sending you the whole of the papers."

Throughout the long life of Dr WRIGHT, and more especially during his residence in Edinburgh, in the evening of his days, there is, perhaps, no feature of his character more strongly marked, than the deep and pervading interest he evinced, and the substantial assistance he afforded, to the rising generation. He remembered the difficulties and perplexities with which he had occasion to struggle in his own outset in life; but it was not in passive sympathy for similar struggles that he allowed his kindness to be exhausted. With an active spirit of beneficence, he sought for modest merit, and persevered in rescuing the objects of his patronage from undeserved obscurity. He appeared, indeed, to enjoy a singular facility in detecting the first germs of genius, and calling them early into action; an observation which is fully warranted by the rank and station to which many of his elèves and protegés have since raised themselves in society. The medical profession, from the nature of his own pursuits, and the corresponding circle of his friends, afforded him a field of usefulness which he neither allowed to remain uncultivated nor unfruitful.

The amiable and respectable feelings which prompted these exertions, induced him to place a higher value on the efforts of the youthful mind than is commonly ascribed to them; not so much, perhaps, from their intrinsic merit, as from the indications they afforded of future excellence. The inaugural dissertations which it is necessary to prepare and defend with a view to graduation, do not always, it is true, present a satisfactory or even sometimes an authentic criterion of the talents of the ostensible authors; and, with some little modification, their merit may perhaps be said to be as variable as the minds of the graduates themselves. Among the brightest ornaments of the healing art, there are few who have combined, like Dr GREGORY, the highest professional attainments with the purest Latinity. And now that graduation is accomplished at so early a period of life, the probable number is proportionally diminished of those who rely exclusively on their own resources for preparing for this ordeal. There was no one, however, who could better judge than Dr WRIGHT of the necessity or extent of such foreign assistance. Although the thesis itself may not be a sufficient test of individual merit, it is chiefly because these juvenile productions are supposed to be above the reach or experience of an unpractised student; but, if taken in the aggregate, it is clear that their average merit affords a satisfactory ground on which a comparison may be instituted between one school of medicine and another. Dr WRIGHT was probably actuated by some consideration of this kind, in collecting the medical theses of

the University of Edinburgh, from the earliest period of her history, arranging them in chronological order, preparing an index *raisonné* of their contents, and putting it to press; which he accomplished, at the close of the year 1800.

In the course of this year, an application of a very flattering nature was made to Dr WRIGHT by his former friend and commander Sir RALPH ABERCROMBIE, to accompany the celebrated expedition to Egypt, in quality of Physician to the Army. Sir RALPH was an older man than Dr WRIGHT, and, with the privilege arising from former intimacy, he urged that circumstance with earnestness as an inducement to accede to the proposal; but, after giving it the deliberate consideration which was due to any suggestion from such a source, Dr WRIGHT resolved to remain in his retirement; remembering the scene of death and desolation which the physician, more vividly than the general, had witnessed in the West Indies; recollecting the painful want he had experienced of congenial society; and feeling that, since that period, his affections had taken deeper root in his native soil.

In consequence of a communication from Dr CURRIE on the subject of a Botanic Garden about to be established at Liverpool, requesting such advice and information from Dr WRIGHT as he might be able to afford, and detailing the extent and situation of the ground which had been acquired for the purpose, Dr WRIGHT, with his accustomed alacrity, made immediate application to such of his numerous corres-

pondents, as he believed to be most capable or most disposed to promote the progress of the infant institution. In answer to a letter from Dr WRIGHT, announcing his readiness to lend his aid on the occasion, as well directly as through the medium of his friends, Dr CURRIE, after treating of other matters, in a letter of the 10th of October 1801, makes his acknowledgments as follows :

" What shall I say to you of the very great debt I owe you—in which, indeed, my best friend ROSCOE takes his share—for the interest you take in our new institution for natural science? We feel your kindness, and the value of your friendship, in the most sensible manner. I communicated your letter to him; and we have certainly felt properly on the occasion, though we have not acted as we ought to do, in being so slow to express our acknowledgments. Your vast knowledge and your extensive correspondence, render your friendship of the greatest importance; but really I do not know how we can accept your kindness, without the means of remunerating you for all your exertions, and very valuable specimens. Our garden is now advancing. The ground is levelled, and the walls building. They include a space of 23,000 square yards, so that the ground is very ample. The house of the gardener is also building, and the green-house. We shall have an engraved plan soon, of which you shall have a copy."

Soon afterwards Dr WRIGHT makes the following communication to Dr CURRIE.

" Dr ROXBURGH, at Calcutta, has sent home a very large collection of dried specimens, of which I am to have a share. They are to be divided with Sir JOSEPH BANKS, and Mr A. B. LAMBERT, Vice-President of the Linnean Society; but I

do not expect my proportion until the spring. I have complete specimens of all those which Dr Roxburgh formerly sent to our Society, at your service. Do not speak of remuneration. Your kind acceptance and friendship will be my best reward. Have you yet determined in what style the specimens are to be put up; the size of paper; and whether they are to be bound in books, or to lie loose in fasciculi? When you state all these particulars, I shall then proceed.

"We have lost," he continues, "our valuable friend Dr Pulteney at Blandford. He has left few in this country equal to him in Natural History, and particularly in Botany. His life of Linnæus, and the lives of British Botanists, are in every body's hands. Dr Garthshore is, no doubt, left executor, and will have the disposal of his books and collections. It would be an object well deserving the attention of the Directors of your institution, as you could better afford to make the purchase than most individuals.

"I have been more perplexed," he proceeds, "in the management of patients in a convalescent state, after dysentery, than during the active state of the disease; and many fell victims, in spite of all the means I tried. A milk diet in general did service. I varied the preparation from rice-milk to rice-gruel, and light rice pudding. My specific was only of use in the first stages, where there was morbific matter in primæ viæ to be corrected. I had some success in allaying the irritation of the stomach and bowels by a slight infusion of quassia, and a paring of lemon peel, made cordial by a small quantity of spirits, or some aromatic spiritous water. At other times I gave the disorder a happy turn, by the mixture of camphor and magnesia.

"But in acute dysenteries, if any of the symptoms continue, the smaller intestines are sometimes affected with topical inflammation, and consequent sphacelus. If so, our best efforts may be applied in vain. In sound constitutions, there

may, however, be a chance; and the Quassia amara appears to me to be the safest and best antiseptic."

About this period he writes to Dr GARTHSHORE:

"A fever has been raging here, and students of medicine have been the principal sufferers. Several of them have died of it, and others are dangerously ill. It is said they caught the contagion in the Infirmary; and if so, it must be ascribed to a want of cleanliness and ventilation. Students are generally attended by professors; and I am not acquainted with the particular treatment they pursue. Dr GREGORY makes use of the cold affusion with success; but there are cases of fever where that alone will not suffice, such as a tendency to, or actual inflammation of the viscera, or congestion in the brain. In such cases, I make very free with mercurials, and with the most marked success; at the same time, I keep my patient cool and airy, and if need be, apply the cold water generally, or partially, should the feverish heat run high. Of late, several bad cases of fever were thus treated, and the symptoms were removed in a few days. Indeed, I have never seen a relapse of fever where calomel was duly used."

In a subsequent letter to Dr GARTHSHORE, he says,

"I have a good opinion of antimonials in all febrile cases, especially in colds attended with fever and plethora. In typhus, I sometimes employ small doses of pulvis antimonialis, conjoined with calomel; but more frequently the calomel alone; and, as I told you before, patients so treated *have no relapse*."

In 1801, Dr WRIGHT was elected a member of the Royal Medical Society; and, at the close of the year, he was called to the chair of the Royal College of Physicians.

The exertions of Dr WRIGHT on behalf of the Botanic Garden at Liverpool, produced a vote of thanks from the committee, which was communicated in very eloquent terms by their Vice-President, Mr ROSCOE, the celebrated biographer of LORENZO DE MEDICI, and the intimate friend of Dr CURRIE. Mr ROSCOE had also delivered a discourse on the occasion of the opening of the garden, in which he noticed the assistance which Dr WRIGHT had afforded, in very flattering terms. A printed copy of this discourse was transmitted by Dr CURRIE to Dr WRIGHT; and on the 27th of September 1802, he acknowledges the compliment as follows:—

"Your kind letter of the 23d of May, together with the two pamphlets, came safely to hand. My warmest thanks are due to Mr ROSCOE, and to you, for the notice he has been pleased to take of me in the address. I shall study to merit his good opinion, and to cultivate his friendship.

"I have just returned from a summer tour in Aberdeenshire, Strath Tay, and Callendar Menteith; in the course of which, I have seen and conversed with many of the best practitioners, and have been glad to find so great a number concurring in our views on the subject of fever, and in the benefits resulting from external cold. Happy had I been, indeed, to have found the *box-bed* excluded from the wretched habitations of the lower orders. It has been, and still continues, to be a great scourge. Like a jail, it engenders contagion, converts a common catarrh into typhus, and infects all who come within the range of its influence.

"I have made some progress with the specimens, and hope I shall now meet with no farther interruption. I look for a large collection soon from Trinidad and Guiana; but that

shall not prevent me from sending you such in the mean time as I can spare."

In a subsequent letter he says,—

"I shall again carefully examine the second edition of your Reports, and make such remarks as occur to me. Dr GREGORY has used the cold dash or affusion in a few cases, with success. Drs HOPE and HOME have also succeeded, and all of them recommend the practice in their academical lectures.

"At Glasgow," he adds, "they are bolder. The influenza has been rife here," he continues, "and fatal to many. The interference of the physician, and still more, that of the surgeon and apothecary, has, I suspect, helped many out of the world, in a very summary way, by treating the patients as for a common cold. Like other contagious disorders, I conceive the reigning distemper to be a *fever of debility*, which does not require the lancet or other profuse evacuation.

"I keep my patients, when in bed, very lightly covered: I recommend them to get up during the day; and, unless very ill, to walk about in moderate weather, in the open air: On any heat or flushing taking place, I desire the hands, face and neck to be washed suddenly in cold water. I allow the patient such diet as he likes best, and to the opulent I order a liberal allowance of wine; to others strong ale, porter, or diluted spiritous liquors after meals. I have never lost a patient by this treatment.

"The cold dash, well timed, will not only cure all febrile exacerbations, but prevent their taking place. Of this I am convinced from daily observation. When any one is threatened with fever, I direct washing the face, and especially the forehead, with the coldest water, three or four times a-day; and I give Dr FAULKNER credit for thinking, that the cold affusion will prevent the plague itself.

On the 5th of November 1803, he again writes to Dr CURRIE,—

"I am happy to introduce to you my excellent friend Mr JAMES MACGRIGOR, surgeon of the 88th Regiment, who had the medical direction of the Indian army when in Egypt. He has every thing to recommend him as a gentleman, a philosopher, and a physician. He has a vast number of medical communications and observations on the plague and other fevers of Egypt and of India. His extreme modesty, I fear, may prevent him from arranging and publishing his materials; but I shall continue to urge his doing so, because I know they will be extremely useful."

On the 19th of June 1804, Dr CURRIE writes as follows to Dr WRIGHT:—

"Knowing you will be interested in the publication beyond any body, I transmit by the coach of this evening, a copy, the first that is made up of my third edition, in two volumes, making in all between seven and eight hundred pages. I intended to have comprised it in one volume, as you will see from the paging, but found my materials, with every care, could not be compressed sufficiently; and since it has gone to two volumes, I am sorry I did not give some of my communications more at large. You will see I have had frequent occasion to introduce your name; and that I conclude as I began with you. I flatter myself that you will find nothing in what I have said to displease you; and I have no doubt you will find, that what human evidence can do, is done, towards the establishment of our practice. Within these few days I have received forty cases from the house of recovery at Cork, which came too late. It is not a little interesting and singular to find experience so uniform on this important subject.

"I have executed this third edition under constant bad

health, and oppressive engagements. It is on that account far less perfect than I could wish; and the table of errata is shamefully large,—but it was impossible it should be otherwise. From the month of October till May, I lost, by venesection, 200 ounces of blood, and took at least eleven ounces of the tincture of digitalis! I could not otherwise have lived. But my languor and oppression are not to be told. Finding some relaxation essential, I broke away from Liverpool on the 9th ultimo, and penetrated into Scotland as far as Moffat. Thence I crossed into Northumberland, and travelled round the north-east coast of England, returning to Liverpool by Harrowgate, Leeds, and Manchester. I reached home, after an absence of twenty-two days, in the course of which I travelled 650 miles, on the 2d instant. I was much improved by my journey, and am now much better, though not quite confirmed. I have been able to give up bleeding and digitalis, and have an excellent appetite for milk and vegetables, which constitute all my food. Depend on it, I was much mortified to be so near you and my other friends in Edinburgh, without seeing you;—but at the time I had no spirits for the meeting, and no breath for your long stairs. I kept out of all great towns, travelling about thirty miles a-day, and living cool and quiet.

"The third edition will not be published under three weeks or a month. I wish, therefore, that you should keep this copy to yourself."

Before this letter had reached its destination, Dr WRIGHT had left Edinburgh on a tour to the Highlands; and, in consequence of the delay in acknowledging the early copy of the Reports, Dr CURRIE had again addressed two short letters to Dr WRIGHT, expressing his anxiety lest Dr WRIGHT should have been dissatisfied with his second volume. On the ar-

rival of Dr WRIGHT in Edinburgh, in the month of September 1804, he immediately wrote to Dr CURRIE, acknowledging receipt of the three letters, with the copy of the Reports; and adding,

" I blushed to read the many kind things you say of me, in many parts of that excellent work. I am happy to tell you, that, in the most remote parts of the Highlands, the country practitioners are adopting your tenets, not only in typhoid cases, but in scarlatina, with every success.

" I had several objects," he continues, " besides recreation in view, in my late tour. Dr JOHN STUART, minister at Luss, in Dumbartonshire, is married to a relation of mine, and has long been my intimate friend. When a very young man he travelled with PENNANT and LIGHTFOOT, and had a principal hand in compiling the Flora Scotica. With him and his family I was quite at home. His garden is stored with every rare European plant, and his collection afforded me much amusement and instruction. From Loch Lomond I crossed the country, through several wild glens, and over bad roads, to Killin, Kenmore, Strath Tay, and various parts of Perthshire, and returned, after an absence of seven weeks, much pleased with my journey."

This interesting correspondence was interrupted by the continued indisposition of Dr CURRIE, and his consequent removal to Bath; and on his part, indeed, it was never afterwards resumed. On the 25th of August 1805, Dr WRIGHT again addressed him as follows:

" I have been too long in writing to my best friend. The delay has been owing to the unsettled state of your health, and to my anxiety for better tidings. Of late I have been relieved by the accounts of various friends who have seen

you. The repeated and copious bloodlettings which you judged necessary, may have given you a temporary relief, but such a drain of the *latex vitalis* could not fail to produce debility, relaxation, and prostration of strength. Of the long continued use of digitalis, I can say little from my own experience. I had a poor man some time ago with hydrothorax and ascites. I ordered him the tincture of digitalis daily, and a grain of calomel every night. In about three weeks the hydropic disorder disappeared. From his pulse continuing irregular, and from his extreme distress at times in breathing, as well as from the strong palpitations of the heart, on the least motion or exertion, I am of opinion there must have been an organic affection either in the great bloodvessels, or of the tricuspidal valves. Our hospital physicians will not receive him. He sometimes takes the calomel, and sometimes the drops, which he thinks keeps the disorder from getting worse."

In another letter of the same date, he adds:

"In June and July I made my annual tour through the north-west Highlands, and again passed some weeks with my friend Dr STUART of Luss. He has the finest private garden, and is himself the best botanist, in Scotland. We ascended Ben Lomond (3150 feet perpendicular), but near the summit were enveloped in a watery cloud, so that we could not see ten yards about us. We, however, attained our object, which was rare alpine plants, lichens, and mosses. Dr STUART and family accompanied me to Inverary, and from thence to Glenorchy, where we made some stay with the clergyman, who is a relation of mine, a worthy and learned divine, celebrated in several books of travels for his attention and hospitality to strangers. I then proceeded to Tyndrum, where there is a rich lead mine, and slept at Killin. From thence I journeyed to Lochearnhead, and passed along the north side of that beautiful lake, through the romantic grounds of Lord

Melville at Dunira, to Crieff, in Strathearn, where I remained sixteen days. My route hither was by Dunblane, Stirling, Falkirk, and Linlithgow, and after a six weeks' tour, I reached home in excellent health and spirits.

" The whole journey had much of a medical character. Apprized of my motions, the sick of all descriptions were brought to me, where I was to stay. I was always fully employed with poor patients, or with the practitioners, in these remote parts. Our treatment of typhus is begun to be known and practised; and I had the pleasure of seeing your two volumes in the hands of practitioners in Argyleshire, and at Crieff. It was at this last place that the Scarlatina anginosa was so prevalent and fatal, of which I have given you some account.

" I hear the fourth edition of your Reports is in forwardness, and you have no doubt had numerous communications on the subject from all parts. The physicians of London, I believe, are the most backward in the use of the cold-dash. I can only account for this, by suppoing them afraid of the prejudices of their patients, or of the apothecaries, or that the *ratio medendi* is so contrary to the doctrines which some of them have taught for half a century. In this view, they are more the objects of pity than contempt."

These letters were addressed to Dr CURRIE's residence at Bath, but they never reached the hands of him for whom they were intended. The increasing illness of this excellent man had induced his removal to Sidmouth, in Devonshire, where he soon afterwards breathed his last. His death is communicated to Dr WRIGHT in a letter from Sidmouth, on the 2d of September 1805. The following is an extract:

" It will, I know, gratify you to find, that, even in the midst of pain and suffering, my father thought of his friends

with tenderness and affection. To you he desired me to convey his last kind affectionate remembrances. You will, I am sure, value them.

" A fourth edition of the work on fever is just finished; happily he lived to complete it. The publication will take place in a very short time. The last chapter of the second volume is new and highly interesting; it relates to the late fever at Gibraltar, and is, I think, most beautiful. The theory of non-contagion is deprecated in the strongest terms!

" Adieu, my dear Doctor; continue to me the friendship you ever had for my father. We return to Bath after the interment, which takes place here. Liverpool will again, in a few months, be our ultimate residence. Accept, my dear Sir, the sincere and affectionate wishes of yours very truly,

" W. WALLACE CURRIE."

" *P. S.*—In reading your letter, I was forcibly struck with the similarity of the case of the poor man you mention, and that of my father."

Some time before this period, Dr WRIGHT had been warmly importuned by his friend Dr GARTHSHORE to break up his establishment in Edinburgh, and devote himself to the performance of a duty, of a very delicate and distressing nature.

Mr W. GARTHSHORE, M. P., one of the Lords of the Admiralty, and the son of Dr WRIGHT'S friend, had married a lady of large fortune, who died in giving birth to twin sons. The infants did not long survive their mother, and through them Mr GARTHSHORE succeeded to his wife's fortune. His mind was unable to sustain so heavy a bereavement, and a permanent aberration of intellect was the consequence. While there was yet a hope of returning reason, Dr GARTH-

SHORE was naturally solicitous that his son should have the assistance of a skilful and devoted friend like Dr WRIGHT, under this most grievous of all human calamities; and it is highly probable, from the generous and disinterested disposition of Dr WRIGHT, that, if the son of his friend had been less amply endowed with the means of securing the best medical assistance, he would readily have surrendered his own personal comfort and convenience to relieve the anxiety of Dr GARTHSHORE. As matters stood, however, he felt himself justified in declining so painful a task; and in doing so, he recommended a physician who had been originally made known to him by Dr GARTHSHORE himself. The recommendation of Dr WRIGHT was adopted, but the consequences of the appointment assumed in the sequel a very serious aspect. It became necessary for Dr GARTHSHORE to call the medical attendant of his son to account in Chancery regarding Mr GARTHSHORE'S pecuniary concerns, for the purpose of restraining him from farther interference. The result was a Chancery law-suit, with all its proverbial delays and inconveniences. In the month of April 1807, Dr WRIGHT was called to London to give his evidence on the subject before the arbitrators; and his feelings appear to have been deeply interested in the issue, from the involuntary share he had had in forming the connection from which the proceedings had originated.

It had long been the habit of Dr GARTHSHORE'S mind to lean with confidence on the firmer intellect of Dr WRIGHT, for advice and direction in the manage-

ment of his affairs. The period of the General Election arrived before Dr WRIGHT was disengaged from the arbitrators; so that, by the avocations of counsel and otherwise, the proceedings were greatly interrupted, and he was detained much longer in town than he intended. The intervals of leisure which thus arose, gave occasion to a great deal of confidential intercourse between the two friends. Dr WRIGHT, on this occasion, gave the same advice to Dr GARTHSHORE which he would himself have adopted under similar circumstances. He counselled him so to settle his affairs, as to leave no ground on which a dispute could be raised regarding the succession to his property. But Dr GARTHSHORE, from an infirmity of purpose, which seems in some minds to be constitutional, found a reason for procrastination, in the unsettled state of the law-suit which had brought Dr WRIGHT to London. At the same time he was fully persuaded of the soundness of the advice he had received, and exacted from his friend a solemn promise of personal assistance, whenever he should find himself prepared for the performance of this important duty.

Dr WRIGHT arrived in Edinburgh by one of the Leith packets on the 1st of June 1807, and soon afterwards proceeded on his annual tour to the Highlands, spending some weeks with his brother's family in Strathearn, and with his friend Dr STUART on the banks of Lochlomond. From Luss, he writes to his brother, on the 24th of August: "It has rained here constantly ever since we left you, but the worthy Doctor and I are always in the fields."

The visit of Dr WRIGHT to London in 1807, appears to have recalled the attention of many of his friends to the subject of his public services, which, in their opinion, had never been adequately rewarded; and, in the following year, he was induced to return to London, with a view to the promotion of this object. Writing to one of his nieces, he says: "I have no desire to accumulate but for your sakes who survive me. Make your father and his friends as happy as I wish them. Let me beg of you to want for nothing that is necessary or proper." Inclosing a handsome remittance, he adds, "The Almighty has blessed me with abundance, and with a heart to give away." Although the chief purpose of his journey was not attended with success, Dr WRIGHT experienced the truest satisfaction from the opportunity which it afforded him of feeling how many valuable friends he possessed, and of witnessing their active exertions on his behalf. He returned to Edinburgh in the month of July 1808, by way of Chesterfield and Harrowgate, paying visits in passing to his friends Dr STOKES and Dr MURRAY, with each of whom he staid several days.

In so far as theoretical views in philosophy are opposed to the results of investigation and the evidence of facts, they found in Dr WRIGHT a steady and determined opponent. He was rather a Neptunist in geology, and had but little faith in the Plutonic theory of HUTTON and his disciples. He was too much habituated to think on all subjects for himself, to subscribe implicitly to the doctrines of any particular

school; and, on the establishment of a society in Edinburgh in the year 1808, for the encouragement of natural science on the general principles which he had long espoused, he took an active interest in the advancement of the institution, and was accordingly one of the original members, and a Vice-President, of the Wernerian Natural History Society *.

On the 11th of October 1809, he thus writes to Dr GARTHSHORE:

"What was the name of the lethargic boy relieved by tincture of cantharides? With this same medicine I cured a lady of a convulsive cough, similar to that of Miss M. In hooping-cough I use nothing else.

"A woman in the fifth month of pregnancy had hiccup for five days, even when she slumbered. She was immediately relieved by the application of a blister to the breast. This I conceive was brought about by the cantharides exciting an action in the system stronger than that of the morbid action.

"Mr WILLIAM JACKSON HOOKER of Norwich arrived here lately from Iceland, where he had remained during the summer, exploring the island for natural productions. He is a man of fortune, one of the best draughtsmen in England, and a complete botanist. He had made a large collection in

* The original constituent members, as stated in the minute-book of the Society 12th January 1808, were, "ROBERT JAMESON, Esq. F. R. S. E., Professor of Natural History; WILLIAM WRIGHT, M. D., F. R. S.; Rev. THOMAS MACKNIGHT, F. R. S. E.; JOHN BARCLAY, M. D., F. R. S. E.; THOMAS THOMSON, M. D., F. R. S.; Colonel STEWART MURRAY FULLARTON; CHARLES ANDERSON, Esq.; Sir PATRICK WALKER; and PATRICK NEILL, A. M., F. R. S. E." The sederunt appears to have been taken down by Mr NEILL, who, as well as all the other gentlemen present, with the exception perhaps of Colonel FULLARTON, are believed to have been personal friends of Dr WRIGHT.

all the branches of natural history, and had kept a journal, in which he delineated plants as well as animals. He embarked in a ship bound to London, on board of which there were some Danish prisoners. They had not proceeded far on their voyage when they discovered the vessel to be in flames, and burning with such rapidity that all must have perished, but for the providential appearance of the Talbot man-of-war, which came up just in time to save the lives of those on board. Mr HOOKER lost his collections, and the one-half of his drawings and journals.

"You are aware that my late nephew visited Iceland with Mr STANLEY. His mineralogical collection was left with me; and I have given Mr HOOKER specimens of the greater part of it. Of some, indeed, I have not retained any duplicate. I I have offered to send him an Icelandic Herbarium, collected at the same time. This will only partially supply the loss, which must be regarded as a public misfortune. Mr HOOKER is intimately acquainted with our friend Sir JOSEPH BANKS, and that would of itself have been sufficient to ensure my best offices."

Mr HOOKER was not unmindful of the attentions he received on this occasion. In his "Recollections of a Tour in Iceland in 1809," he makes his public acknowledgments in the following terms:

"Neither can I suffer to pass in silence the civility of Sir GEORGE MACKENZIE, in collecting plants for me in his late excursion to Iceland; nor the attention shewn me by Dr WRIGHT of Edinburgh. Though a stranger to him till my arrival at that city on my return from Iceland, he participated feelingly in my misfortune, and begged me to make any use I pleased of the subjects of natural history in his possession which had been collected in Iceland by his nephew, the late Mr WRIGHT, an amiable young man, who accompanied

Sir JOHN STANLEY on his voyage to that country. This offer was succeeded by the present of a considerable collection of Icelandic minerals, and a scarce and curious work, entitled 'Rymbegla, sive Rudimentum Computi Ecclesiastici Veterum Islandorum."

On the 6th of November 1809, Dr WRIGHT thus writes to Dr GARTSHORE:

"The fever at Walcheren, so fatal to our troops, is no other than the endemic fever of marshy countries, and is well described by Sir JOHN PRINGLE and Dr GRAINGER. The winter will put a stop to it, as there will be no evaporation from the stagnant and putrid water in the canals and ditches.

In a subsequent letter, with reference to the case of a common friend who had been endeavouring to get himself placed on the Medical Staff of the Army, Dr WRIGHT observes to Dr GARTHSHORE:

"The truth is, the half pay list is burthened with young physicians who have served a campaign or two, and have then made interest to retire, without being again liable to be called on to serve. Very different," he adds, "is the case of a navy surgeon, who is obliged to serve while life or health continues, under the penalty of forfeiting his half pay."

Soon afterwards he writes to his brother:

"Sir P. MURRAY has been so polite as to propose that I should become an honorary member of the Agricultural Society of Strathearn. Of the rural economy of this country I know but little, although in that of the West Indies I am quite at home. I formerly prepared a paper on the subject of the potato, for the Board of Agriculture, including the history of the plant, its introduction, culture, and various uses. If the hints were followed which I have there suggested, you

might eat bread of excellent quality one-third cheaper than at present *. When I know that your Society is formed, I shall present them with some books on agricultural subjects."

During the summers of 1810 and 1811, Dr WRIGHT enjoyed his accustomed relaxation of a Highland tour; and, in proof of the continued vigour of his constitution, it may be mentioned, that, after travelling post from Edinburgh to Inver, in the neighbourhood of Dunkeld, in the month of August 1811, he proceeded, *on foot*, from thence to Kinnaird, the residence of his friend Mr IZETT, a distance of six or seven miles. In the course of this summer, Dr WRIGHT had the pleasure of receiving a second visit from Sir FREDERICK, the son of his old friend Sir GEORGE BAKER, and of introducing him to Dr STUART of Luss, and his other friends in the Highlands. The young baronet

* This paper was prepared at the instance of Sir JOHN SINCLAIR, to whom the agriculture and statistics of the country are so much indebted for the facts he has accumulated and digested on these important subjects. The thanks of the editor are due to the Right Honourable Baronet for the trouble he has taken in tracing several of Dr WRIGHT's papers, as well as for the communication of a letter addressed to him by M. DESMAZIERES of Lille, acknowledging the arrival of a collection of plants which had been prepared for him by Dr WRIGHT shortly before his death, and which had been transmitted some time afterwards by the attention of Sir JOHN SINCLAIR. The letter of acknowledgment is in the following terms:

" Monsieur le Chevalier,

" Je crois utile de vous apprendre que je viens de recevoir le paquet de plantes qui vous avez eu la bonté de m'adresser, et pour lequel j'avois déjà des inquietudes.

" Je partage votre douleur M. le Chevalier. La perte du Docteur WRIGHT doit etre sensible aux amis des sciences; il etoit du nombre des sçavans dont l'Angleterre peut s'honorer, et sa memoire sera toujours chere à ceux qui comme moi ont pu apprecier ses rares qualités."

had been so much pleased with a former visit to Edinburgh, in 1809, that he engaged to return to Scotland for the purpose of completing his northern tour; and he appears, from Dr WRIGHT's correspondence, to have been greatly delighted with the reception he had met with.

On the 14th of June 1811, Dr WRIGHT observes to Dr GARTHSHORE:

"I have a kind letter of thanks from our good friend Sir JOSEPH, for a book I lately sent to him. It was ALSTON's own copy of the Tirocinium Botanicum, and contained several pages of MS. notes in the author's handwriting, prepared apparently with a view to a second edition. Dr ALSTON was Professor of Botany in your time, a man of character, an excellent botanist, and the keenest adversary of the Linnean doctrine. I am proud of Sir JOSEPH's acceptance of this curious relic, as it will be extant for many ages to come.

"We have had a large crop of doctors," he adds, "this graduation, no less than 26. The authors on *Tetanus* and *De Usu Aquæ Frigidæ externo* have done me great justice. You will shew the paragraphs to Sir JOSEPH, whose liberal mind will rejoice."

He again writes to Dr GARTHSHORE, on the 6th of July 1811.

"I have sent a paper which I lately prepared on the absorption of morbid poisons, to Sir JOSEPH BANKS, and have begged of him to shew it to you and Dr BLAGDEN, and to Messrs HOME, HEAVISIDE, and ABERNETHY. One of the cases is that of a whitlow, of an ill-disposed nature, similar to that, perhaps, which occasioned the loss of your finger. Should the subject be thought new or important, it may be given to the public through some respectable channel."

In a subsequent letter from Dr GARTHSHORE, he mentions having received this paper from Sir CHARLES BLAGDEN, to whom it had been communicated by Sir JOSEPH BANKS; and that he had delivered it to Dr YELLOWLEY, for publication in a forthcoming volume of what he calls "The Verulam Transactions;" but, after a good deal of inquiry, it has been found impossible to trace either Dr WRIGHT'S paper, or the work in which it was to have appeared. The name may possibly be a *soubriquet* familiar to the two friends; or the paper may have shared the fate of much that is valuable, though fugitive, in the walks of science, as in the lighter paths of literature.

At the close of the year 1811, Dr WRIGHT was called upon by his friend Dr GARTHSHORE, to redeem the pledge he had obtained in the year 1807, of Dr WRIGHT'S personal assistance in the final adjustment of his temporal concerns. The promise he had made to Dr GARTHSHORE was always regarded by Dr WRIGHT as a sacred obligation; and he prepared for its performance at a very unseasonable period of the year, with the utmost readiness and equanimity; believing, as he said himself, before his departure from Edinburgh, that it would not only contribute to his friend's peace of mind, but, in all human probability, add some years to his life. The resolution at which Dr GARTHSHORE had at length arrived, would have been held by Dr WRIGHT, under any circumstances, to be an indispensable duty; but he believed it to be peculiarly incumbent on his friend, from the extraordinary channel through which the greater part of his

fortune had been acquired. The ordinary laws of nature appeared, in the case of Dr GARTHSHORE, to have been completely inverted. He had survived all his descendants, and through them had succeeded to a princely inheritance. It was a case, therefore, which required a deviation from the legal order of succession; and Dr GARTHSHORE appears to have acted under a becoming sense of moral duty, in causing a part of the golden tide to revert to the source from which it had originally flowed. It was a case, too, in which no one could be said to have been injured, if Dr WRIGHT had permitted his friend to insert a legacy in his own favour; but, under the peculiar circumstances in which he found himself placed, as the original proposer of the measure, he felt that, by compliance with the wishes of Dr GARTHSHORE, he might subject his own high character to misconstruction; so that he thought himself called upon to use his influence with his friend, to expunge his own name, with a bequest of L. 5000, from the instructions which Dr GARTHSHORE had prepared for the use of his solicitor in framing his testamentary disposition.

Dr GARTHSHORE appears to have postponed the execution of his purpose until he saw that it would be finally defeated by longer delay. His mind and that of his friend were very differently constituted; and it is probable that, in place of lengthening his life, as, judging from his own feelings, Dr WRIGHT had predicted, the discharge of this last duty had relaxed the tension of the cords which supported his existence, and he felt that to live longer would be but to survive his

usefulness. Whatever truth there may be in this hypothesis, it is certain that the strength of Dr GARTHSHORE very speedily gave way after the execution of the necessary legal formalities; and Dr WRIGHT had the satisfaction to receive his dying assurance that his mind had been relieved from an unspeakable load of care and anxiety, by the execution of a task which was equally due to his present peace of mind, and his future good name; and which he felt that he could not have accomplished without the guidance and support of a tried friend like Dr WRIGHT. After the last duties were paid to his remains, Dr WRIGHT prepared for his return to Scotland, in the full enjoyment of that consciousness of mental rectitude which was not, in his estimation, to be compared in value with the whole fortune of Dr GARTHSHORE. The sense of delicacy and disinterestedness by which he was directed is indeed well worthy of commemoration. He had answered the call of his friend with promptitude, in so far as the performance of an abstract duty was concerned; but the importunity of the same friend, when directed to his acceptance of a moderate portion of an estate which was destined for distribution among comparative strangers, was resisted with equal firmness and magnanimity, not because his compliance would have inferred any moral wrong, but from a jealous regard for the "immediate jewel of his soul," his own fair fame.

The noiseless and unvaried tenor of Dr WRIGHT's existence, in the latter years of his life, affords very slender materials for biographical remark. He had

survived almost all his early connections, and found himself too far advanced in life to form new friendships, or engage in new undertakings. He had the happiness, however, to be surrounded by affectionate relatives, who with kindred sentiments of disinterestedness and self devotion, were emulous in the anticipation of all his wants; nor did he ever lose the relish for that general society, which the native playfulness of his humour, and his happy talent for conversation, so eminently qualified him at once to embellish and enjoy. The name, indeed, of a single friend, with whom, till the close of his career, he continued to maintain the closest habits of intimacy, will evince more strongly than a thousand epithets, the possession not of powers of pleasing merely, but a powerful and masculine turn of thought and expression, when among his daily associates, is found that *ultimus Romanorum* the late Dr GREGORY.

The lasting intimacy which existed between Dr WRIGHT and Dr GREGORY, could not be said to have arisen from any thing like a constant coincidence between their views, on scientific or professional subjects. Even, indeed, when they differed in their doctrines, and still more when they happened to concur, Dr GREGORY was accustomed, in his academical lectures, to mention the name of his friend Dr WRIGHT, and the opinions which he supported on the subjects under discussion, in terms of the highest respect. About a year before the death of Dr WRIGHT, an instance occurred of a striking and memorable nature, in which the sentiments of the two friends were at va-

riance on a point of practice. By the accidental overturn of his carriage at some distance from Edinburgh, Dr GREGORY suffered the misfortune of a broken arm; but although the accident was not announced to Dr WRIGHT, he was in daily attendance at the door of his friend's house, to make his personal inquiries as to the progress of his recovery. When they next met, Dr GREGORY reproached Dr WRIGHT for the ceremonious distance he had observed in his visits, and the unwonted recurrence to a form of etiquette in leaving his daily ticket at his door,—so inconsistent with their long habits of intimacy and friendship. Dr WRIGHT, in his turn, took his friend to task, for not acquainting him with the accident as soon as it occurred. To this Dr GREGORY replied, that he was resolved at all hazards to be bled, and that he knew Dr WRIGHT would have strenuously resisted the operation. He added, that he had in fact sustained a copious evacuation, and in proof of the efficacy of the practice, he called upon his friend to witness the rapid progress of his recovery. This practical defence of venesection brought to the mind of Dr WRIGHT no conviction of its propriety in the case of his friend, to whom he remarked, that he might think himself fortunate if he escaped the more serious evils of water in the chest, after doing so much violence to the course of nature. Before the death of Dr WRIGHT, Dr GREGORY began to experience the symptoms of hydrothorax. He complained of breathlessness and fatigue after climbing Dr WRIGHT's stairs, and was

often heard to express the apprehension he began to entertain of the truth of his friend's prediction; observing with an action, and an emphasis corresponding to the words, "There is certainly something *here* which I should be much better without."

The desire of posthumous distinction appears to have been early implanted in the mind of Dr WRIGHT. It was indeed his ruling passion, and may be said without a figure, to have been strong even in death. The occasions were probably few on which he had reason to complain of injustice from his contemporaries, and it was still more seldom that he chose to notice the plagiarisms to which an original thinker, who expresses his ideas in unpretending language, is peculiarly liable. The love of fame, in the mind of Dr WRIGHT, so far from tending to any querulous or misanthropical feeling, partook rather of the generous and social sentiments with which it was associated. Such, accordingly, was the regard which he bore to his friend Dr CURRIE, as to lead him to disclaim the encomiums which that high-minded individual has with equal justice and liberality applied to his name. Far from disputing with Dr CURRIE, as to the priority of his pretensions, or the ratio of their respective claims to the gratitude of posterity, he was contented, he was accustomed to say, to be handed down to future ages by his friend, or with his friend, as a benefactor of mankind. To a man who cherished such sentiments as these, it was natural that some revulsion of feeling should take place when he found the biographers of his deceased friend, disregarding the positive, and in-

controvertible evidence which had been recorded by Dr CURRIE himself, not in the narrow language of a too learned profession, but in a work which is destined for the use and enjoyment, as well as the benefit, of mankind. Large allowance should no doubt be made for the partiality of private friendship, in framing the funeral eulogium of departed worth, and it is probable that the mere suppression, in such ephemeral notices, of his own connection, with the basis of discovery on which Dr CURRIE had reared the pillar of his fame, would have excited no feeling of surprise or uneasiness in the mind of Dr WRIGHT. But the case was materially different, when he found, in a memoir of Dr CURRIE, prepared with becoming care and attention, many years after his death, sanctioned, too, by the name of a respectable divine, and destined for preservation in the pages of a scientific and popular work, like the Edinburgh Encyclopædia, that his own name was not only in a great measure suppressed, but that his undoubted priority in the path of discovery was brought into question by the detail of a youthful adventure, which is said to have occurred to Dr CURRIE in the year 1778, as illustrating the pernicious effects of an over indulgence in the cold bath, and which is introduced with the exordium, that "it is curious to observe, to what apparently trivial occurrences we are indebted for some of the most important discoveries in science and art."

Dr WRIGHT was more sensitive to this inroad on his dearest possession, when he found it sanctioned by the name of a gentleman, who was not only personal-

ly known to him, but who stands deservedly high in the sacred profession to which he belongs, as well as in the current literature of the day.

Even in the vigour of manhood, Dr WRIGHT had never engaged in any thing like controversy; and, at his advanced age, while his feelings on the subject appeared to acquire additional intensity, he preferred a friendly remonstrance with Dr CURRIE's biographer, to a more public assertion of his claims. The draft of a letter has been found among his papers, dated soon after the appearance of the memoir, and addressed to the Reverend HENRY DUNCAN of Ruthwell. It seems to have been originally dated on the 27th of May 1815, during the sitting of the General Assembly of the Church; but from the date of the answer, it does not appear to have reached its destination for four years afterwards, owing probably to the anxiety of Dr WRIGHT, to soften at a personal interview any unfriendly feeling which might arise between the parties. The original letter of Dr WRIGHT, and the answer of Dr THOMAS TUDOR DUNCAN, are conceived in the following terms:

"51 HANOVER STREET,
"EDINBURGH, *27th May* 1815.

"MY DEAR SIR,

"Hearing you are in town, I wish you to favour me with a call, any day before twelve o'clock. Should this be inconvenient, I beg you to indulge me with an explicit answer in writing to the following queries:

"1*st*, From what source have you derived your information respecting the medical writings of our late excellent

friend Dr CURRIE, for the memoir you have published in the Edinburgh Encyclopædia?

"2*d*, As you seem to think that Dr CURRIE practised the cold affusion in the cure of fever and tetanus, before the appearance of my paper on the subject, and of course that he was the author of the discovery, will you allow me to ask, Whether you have taken this upon trust? or, Whether you have given Dr CURRIE's Reports an attentive perusal?

"Dr CURRIE was one of the most enlightened and liberal men of his time. I am satisfied with what he says of me in many parts of his work; and you and my other friends would blame me if I accepted a less share of credit than Dr CURRIE has assigned to me, while I rely with confidence on the justice of posterity. Believe me, my friend, I harbour no resentment against you. At the same time, I trust you will be able to explain your conduct, in drawing up the article of which I have so much reason to complain. I am, with the greatest esteem, my dear Sir, your faithful friend,

"WILL^M. WRIGHT."

"*Dumfries, June* 3. 1819.

"MY DEAR SIR,

"Your letter to my brother HENRY, of the 20th May, ought to have been addressed to me, for although his initials are appended to the paper to which you refer, I am in point of fact the writer of that particular passage which has unhappily incurred your displeasure. *Me, me, adsum qui feci, in me convertite ferrum.*

"During a momentary interview which I had with my brother the night before last, as he passed through Dumfries, on his return home from the Assembly, he left your letter in my hand, requesting me to address my sentiments upon it to himself, as he did not think it necessary for my name to appear in the business. To this proposition, however, I cannot accede, for as my MS. was not submitted to his revisal,

I alone am responsible for the statements which it contains. I have, therefore, unknown to him, adopted the less circuitous and more open measure of corresponding directly with yourself.

" Your communication, my dear Sir, has grieved me beyond expression. To give unnecessary pain, even to an enemy, would be revolting to my principles; but to find that a revered friend and benefactor considered himself as grossly injured by any thing that had dropped from my pen, could not fail most distressingly to agitate my mind.

" Five years have elapsed since the paper in question was committed to the press. I could not, without inspecting it, recollect in what terms I had expressed myself with regard to you. Yet I was comforted by the certainty, that it must have been impossible for me to defraud you of the credit which you had so honourably earned. I felt that my unfeigned affection for you, must, even independently of a higher principle, have excluded every such intention from my mind; and I could not but know that the attempt, had it been made, must have failed, and must have exposed me to the ridicule and indignation of the medical world. Nor could any genuine friend of Dr CURRIE have wished to exalt such a character as his at the expence of another's reputation. Under these impressions, I turned up the passage to which your letter relates, and I do think, on reperusing it, that it will be no difficult matter to convince you that you have taken a very erroneous view of my statement.

" It is true I have referred the origin of Dr CURRIE's work on the effects of water in fevers, to the fact of his attention having been attracted to the subject of the operation of cold on the living body, so early as 1778, when he was a student of medicine; and I am of opinion, that, had it not been for this circumstance, your valuable paper in the London Medical Journal might not have struck him more forcibly than it did other able physicians, who read and admired

it, without putting your system to the test of experiment. But I have no where insinuated, nor wished it to be supposed, that Dr CURRIE's practice was not founded on yours; on the contrary, you will find, on examination, that I have more than insinuated, I have distinctly *intimated*, this fact, by saying that he determined to *adopt* the system which it (viz. your paper) recommended, because he had already learnt how to appreciate your discrimination and judgment."

Dr DUNCAN proceeds at considerable length, and in the best possible spirit, to endeavour to convince Dr WRIGHT that he had misconceived the fair import of the paper in the Encyclopædia; and he concludes with the assurance of his readiness to make any farther concession or explanation which their mutual friends might require, and which he could honestly grant, authorizing Dr WRIGHT, in a postscript, to make of the present letter what use he pleased. Dr WRIGHT, however, made no use of it whatever. When he dispatched his remonstrance to the supposed author of Dr CURRIE's memoir, he appeared to feel that he had discharged a duty which he owed to his own memory; and from thenceforth he seemed to have made an effort to dismiss the subject for ever from his mind.

The idea of the present volume, as was noticed at the outset, originated in a desire to collect the scattered papers of Dr WRIGHT, and so accomplish a purpose which he had not himself abandoned until within a few months of his death. It was afterwards thought desirable to accompany the collected papers with some account of a life which could not fail to be

highly instructive; and the grateful task of doing justice to the memory of Dr WRIGHT would have been left imperfect, if, by any omission on the part of him who has been entrusted with its execution, it could have been supposed that this good and venerable man had ever ceased to cherish that purest of all earthly passions, the desire of posthumous distinction. But although always impressed with a becoming sense of what was due to his own reputation, he was never known to trench, in the slightest degree, on the rights or privileges of others.

The kind and even anxious interest which he continued to take in the prosperity and comfort of his friends, was perhaps as perfectly social in its nature, and as free from any reference to self, as it is given to mortals to enjoy. The last letter which he ever penned, affords indeed a double source of interest. It was dated on the 3d of September 1819, within a few days of his death, and bears internal evidence of the calmness and composure with which he contemplated his approaching dissolution. But it is chiefly remarkable for the proof which it affords of the unimpaired possession of all his faculties, and for the undiminished ardour with which, till the latest period of his life, he continued to apply the energies of his mind, and the influence of his name and character, to the advancement of the immediate interests of his neighbours and his friends. The letter is addressed to a Member of the Legislature, connected by ties of friendship with the head of the Government: and its object was, to bespeak the

good offices of his correspondent, in behalf of a friend, who was desirous of obtaining a seat as a Commissioner at one of the Scottish Boards of Revenue. After detailing the grounds on which the application was to be supported, in terms the most perspicuous and concise, he thus closes the subject:

"Now, my dear friend," he says, "will you take this excellent man under your protection? It will be truly pleasing to me to hear from you that you are making progress in the matter, and still more so, that your exertions are likely to be crowned with success."

He then mentions the particulars of his own illness in the following terms: "I have been confined to my room for the last six months. An influenza or catarrhal fever left me with swelled feet, chiefly at the ancles, and small of the legs; with burning fiery eruptions, resembling nettle-rush, which resisted every medical application. These, it is true, have abated; but I am never free from severe chills, and burning heats in the small of the legs, which deprive me of sleep and ease. For several months my general health was little affected; but now I find it has suffered, and that my strength is much and daily impaired. My medical men are of the first rank *, and my nurses, being of my own family, are of a sort which does not always fall to the lot of princes.

"I dare say," he continues, "you may by this time have received the three volumes of correspondence betwixt our late venerable friend Dr GARTHSHORE and myself. It is the last proof I can offer of my friendship to you. For myself I have nothing to ask, but a continuance of your good opinion.

* Dr GREGORY and Dr THOMSON.

"Farewell," he concludes, "my dear and excellent friend, may you and your amiable family live long and happily together; and when time shall be no more, may we all meet in another and a better world. God bless you."

Thus preserving and cherishing, to the close of his career, the same generous sentiments which had marked his whole life, and the noblest disregard of personal comfort, when any exertion of his could promote the advantage of others, it is truly a gratifying spectacle to observe the course in which this expiring effort was directed, and to witness the deliberate earnestness with which, as a dying man, he pleads the cause of his friend. But although his hand, on this occasion, retained its accustomed steadiness; although his diction followed the traces of his pen with its wonted fluency; and although the characters assumed the same round and print-like regularity of form, for which his autograph was so peculiar, yet the effort had been too great for his enfeebled frame, and exhausted nature sunk under the exertion.

From this period his remaining strength abated by daily and more perceptible gradations, until, on the 19th of September 1819, in the 85th year of his age, he calmly breathed his last.

No painful struggle disturbed the serenity and composure of his dying moments. Like a well-constructed piece of mechanism, his frame performed its appointed functions until the perishable materials of mortality could no longer detain the etherial spirit which gave it life and motion. One of his last observations to his friend Dr GREGORY, was to direct his

attention to the entire immunity from sickness which he had always enjoyed, remarking, that, even then, in the immediate prospect of death, he was perfectly heart-whole. On this occasion Dr GREGORY, with all his characteristic openness of disposition, began to feel his own firmness giving way, and made an effort to lead the thoughts of his dying friend into another channel, observing, at the same time, that he was convinced of his perfect self-possession, and that he was sure he would meet his last adversary like a man; to which the other rejoined, "And like a CHRISTIAN!"

THUS ended a life of activity and usefulness, the particulars of which, if they had had the fortune to be recorded by a writer of adequate attainments and experience, would doubtless have presented a lesson of a more instructive nature than the brilliant annals of war or diplomacy can boast.

With a view to fix the attention of the reader as constantly as possible on the subject of the memoir, and at the same time to diminish the numerous deficiencies in its execution, an attempt has been made, by extracting such passages from Dr WRIGHT's correspondence as could be conveniently embodied in the narrative, to enable him, in some measure, to tell his own story; and so to give to the work, as far as the materials admitted of it, a portion of that peculiar interest which attaches to a piece of auto-biography. This, indeed, was felt to be the more necessary, from the very limited opportunities which the writer enjoyed of personally observing the nicer shades of a character,

the whole of which he has been taught to esteem and to venerate: The great disparity of age between the parties made these narrow opportunities even less available than otherwise they might have been, to the delineation of a faithful and highly finished portraiture: Yet he cannot acquit himself of a task, in which, during the few leisure hours which he has been enabled to devote to it, he has found a fund at once of useful information, and a subject of satisfactory reflection, without attempting an estimate of the result, however summary and imperfect.

As a physician, Dr WRIGHT was chiefly remarkable for his total immunity from the prejudices of system. He never involved himself in the trammels of any particular school. His mind was at all times accessible to truth; and he had the courage to declare his conviction, although, in doing so, he should stand alone. His opinions, at the same time, were never taken up in haste, to be, perhaps, as hastily rejected. He was a close observer of nature, prying with curious eye into her most secret recesses, and questioning her oracles with unwearied importunity*. Neither did he

* A singular fact is stated by Dr WRIGHT, in one of the volumes of his Herbary. When suffered to go at large in the thickets of a West India plantation, the hog digs up the roots of the bitter cassada, and, eating them covered with mould, thrives and fattens rapidly in places where the plant is plentiful. But when the same root is washed, or otherwise freed of earthy matter, and given to the hog, it operates as an active and deadly poison. Another plant of the same genus, the common cassada, is regularly used by the Negroes of Jamaica as an article of food; and when at any time the bitter cassada had been eaten by mistake, Dr WRIGHT, adopting

deliver the responses he received with an air of dogmatism or self-sufficiency. On the contrary, with a becoming sense of what was due to his own character and station, he had to contend through life against an innate diffidence of manner and address, which, while it retarded his own immediate advancement, has contributed, in some degree, to curtail the credit which is due to him as an original thinker, a bold and successful experimentalist, and an accurate expositor of the laws of nature. His practice partook of the simplicity which characterises the great school in which he studied. His remedies were few, but efficacious. A determined enemy to every species of quackery, he la-

the suggestion of nature, prescribed large draughts of warm *muddy* water, which, either operating as an emetic, assisted in carrying off the offensive matter, or, mixing with it in the stomach, corrected its pernicious effects. It is also remarkable, that the meal obtained by grinding the roots of the bitter cassada, may be rendered perfectly safe, and even salubrious, by repeatedly washing it in fresh supplies of water, so as to separate the meal or solid part of the root from the natural juices of the plant. And indeed it appears that the Negroes of St Domingo make the meal thus purified into bread, and use it as an ordinary article of food.

Following the course of nature, Dr WRIGHT made it a rule not to eat of plants avoided by the lower animals; and, on the same principle, when he observed a plant reputed to be poisonous to be eaten freely by any family of the brute creation, he concluded, *a priori*, that the common prejudice was not well founded. The fruit of the bead or hoop tree is rejected as poisonous by the Negroes of Jamaica; but observing it to be eaten greedily by the horse, Dr WRIGHT ascertained that it was equally safe for mankind; a singular illustration this of the relative value of brute instinct and human reason.

boured, in many cases, to inculcate the doctrine, that nature was fully adequate to the performance of the cure, if left to her own free agency. In fever, while he reprobated the practical introduction of the theory of non-contagion, he was foremost in recurring to that cool mode of treatment, which happily since his time has been generally adopted as a rule of practice. There are few indeed so hardy, at the present day, as to dispute the advantages of an airy and well ventilated apartment, in preference to the hot, close room in which it was formerly the hard lot of a patient to be "cabin'd, cribbed, confined." But it is to be feared, that, practically speaking, sufficient attention has not even yet been paid to the subject; and that the use of the bath, for the prevention or the cure of fever, is still too much neglected.

The intrepidity of Dr WRIGHT's practice overcame another professional prejudice regarding the use of calomel, and other mercurial preparations. In place of being deterred from the exhibition of these active agents, while he was employing the cold affusion, he found this powerful mineral more subject to controul, and, when administered in less than ordinary proportions, even more effective and more safe, under the use of the cold bath, than without it; by the greater certainty of its operation on the extreme arteries and excretories during the abatement of the symptoms, occasioned by the abstraction of morbid heat. Congestions in the viscera, and the consequent idea of inflammation, were thus obviated or removed, and the free use of the lancet, a practice which he deeply de-

precated, was, with its attendant train of evils, rendered at the same time in a great measure unnecessary.

From the period of Dr WRIGHT's return to his native country, he ceased to practise the art of medicine professionally, yet he had always a considerable list of poor patients, for whose use he maintained, in his own house, a sort of private dispensary, the value of which must have been deeply felt, when public institutions for the gratuitous supply of medicines to the poor were unknown in Edinburgh. Among the Professors in the University, and other respectable families, who, by the courtesy of the profession, are not permitted to pay a physician's fee, Dr WRIGHT had also a numerous list of patients. By this gratuitous course of practice, he never allowed his knowledge of an art which he loved, to fall below the highest standard of his contemporaries; appropriating, at the same time, a better title than others to the noble eulogy of TULLY:—Nulla in re propius accedunt homines ad Deos, quam salutem hominibus dando.

In the various departments of natural history, Dr WRIGHT had extended his researches with an assiduity and success in some degree proportionate to their usefulness. Once engaged, indeed, in this attractive and fascinating study, it calls for no ordinary stoicism to stem the tide of inquiry, and to refuse to allay the thirst for knowledge, because all its channels are not equally fraught with obvious and immediate advantages. The rare and curious in nature possessed attractions for an inquiring mind, like that of Dr

WRIGHT, which could not have been satisfied with its own exertions, while any corner of the field remained to be explored. In that interesting kingdom which extends "from the cedar of Lebanon to the hyssop on the wall," he found a peculiar source of delight, from the devotion with which he applied himself to the improvement of the healing art. It was indeed by this happy combination of professional skill with botanical inquiry, that he made those discoveries in science which raised him to the highest literary distinctions, and brought him to be favourably known in that select circle of science, where BANKS, SOLANDER and FOTHERGILL, SMITH, LIND and PULTENEY, BLACK, HOPE and RUTHERFORD, HUTTON, HOME and the two HUNTERS, were the burning and the shining lights.

The footing which he thus acquired by his professional and scientific attainments, he gradually secured by the simplicity of his manners, and the endearing qualities of his heart. It is indeed in the ordinary relations of society, and amid the amenities of domestic life, that the character of Dr WRIGHT is to be viewed in its most amiable light *. Ever ready to defer the gratification of his own wishes, he thought no sacrifice too great, when it served to promote the interests or advancement of a friend. If he never knew what

* Temperate in all his appetites, he was abstemious almost to singularity in his indulgence in the pleasures of the table.—For the last twenty-five years of his life, he never, in any form, made use of ardent spirits, and a third glass of wine was the greatest excess which, during that long period, he ever committed.

it was to be a husband or a father, it was not because he wanted the sentiments of tenderness which give to these endearing relations their intrinsic value. The family of his brother were to him as so many adopted children; and on them he lavished all a parent's fondness. He survived his brother only a very few months, and to the last maintained for him that strong affection which is so strikingly evinced throughout their long and interesting correspondence.

Among the peculiar objects of his care, was the pale student, struggling for the acquisition of knowledge, against the depressing influence of penury and neglect; toiling perhaps for mere subsistence, during the course of academical learning, which his meritorious ambition had prompted him to pursue; until he has at length been enabled to surmount the numerous obstacles which beset his path, to emancipate himself from the unlettered and degraded caste to which he originally belonged, and to rise to some distinguished station in a learned and honourable profession. Such successful struggles are not uncommon in the Scottish Universities; and Dr WRIGHT, though slow at the outset to encourage so hazardous an undertaking, was never backward with his purse, his counsel, or his influence, to promote its accomplishment, when he found a fit occasion for the exercise of his benevolence.

"Open as day to melting charity," his hand was ever ready to second the impulse of his heart, for the succour of the aged and the needy, the widow and the orphan. In Crieff, his native village, as well as in Edinburgh,

he had a regular list of pensioners, who would have had serious cause to lament his death, had not the successors to his fortune been also the inheritors of many of his virtues. Endowed with all the amiable qualities of his species, yet ready to acknowledge how far his purest purposes fell short of perfection, the words from his lips would have been singularly appropriate as a short but comprehensive summary of his character :

" Homo sum, humani nihil, a me alienum puto."

About a year before his death, Dr Wright purchased a place of interment in the Grey Friars' Churchyard, which now bears the following inscription :

GULIELMO WRIGHT, M. D.

SOCIET. REG. LOND. ET EDIN. COLL. REG. MED. EDIN. SOCIO,

EXERCITUS IN INDIA OCCIDENTALI MED. EMER.

&c. &c. &c.

VIRO IMPRIMIS BENIGNO ET INGENUO,

IN HISTORIA NATURALI

ET SCIENTIA OMNIGENA AD REM MEDICAM PERTINENTE,

PERITISSIMO;

MEDICO SOLERTISSIMO, CELEBERRIMO,

DE HUMANO GENERE OPTIME MERITO;

QUI

INGENIO QUAM MAXIME PRÆDITUS, ET VIRTUTE

ARTEM MEDENDI PLURIMUM AUXIT, ORNAVIT, EMENDAVIT;

CRIFÆ IN AGRO PERTHENSI NATO

MDCCXXXV,

EDINBURGI MORTUO

MDCCCXIX,

HOC MONUMENTUM,

ANIMO PIO, FRATRIS FILIÆ

POSUERUNT.

PAPERS,

CHIEFLY ON

BOTANICAL AND MEDICAL SUBJECTS,

BY THE LATE

WILLIAM WRIGHT, M. D.

F. R. SS. L. & E., &c.

The following papers have in part been selected from the MSS. of Dr Wright, but the greater proportion of them have already appeared in the Philosophical Transactions of London, Edinburgh, and Philadelphia, and in other publications.

AN ACCOUNT

OF THE

MEDICINAL PLANTS GROWING IN JAMAICA.

[This paper appeared originally in the 8th volume of the London Medical Journal. The additions inclosed in brackets have been extracted from Dr Wright's Herbaria, begun in the year 1773, and completed in 1813.—Ed.]

To Sir Joseph Banks, Bart. P. R. S.

Sir,

At the request of the late Dr Fothergill and Dr Solander, I drew up an account of the officinal plants growing in Jamaica, for the Medical Society of London; but the death of those valuable friends, and the dissolution of that society, have occasioned it to remain unpublished. Having now revised this paper, and added thereto a considerable number of observations and facts, I take the liberty, Sir, of presenting it to you as a testimony of my respect; and, if it meets with your approbation, I request the favour of you to transmit it to Dr Simmons, to be inserted in the London Medical Journal.

I have the honour to be, Sir,

Your most obedient and very humble servant,

William Wright.

Edinburgh,
May 27. 1787.

INTRODUCTION.

I BEG leave to observe that the following descriptions of plants were made on the spot, and that the medical remarks are the result of careful observation and experience in the practice of physic, for many years in Jamaica.

I flatter myself that I shall be found to have made discoveries, new and important, which have escaped the notice of SLOANE, JACQUIN, and BROWNE, and that what I have written will throw some light on the history of the Materia Medica.

If men of abilities and observation would contribute thus to the public stock, we might hope that the history of foreign drugs would soon be made more perfect.

1. ALOE PERFOLIATA.—*Hepatic Aloes.—Cabaline Aloes.—Barbadoes Aloes.*

THIS is a common plant in all the West India Islands. It is known by the name of *Sempervivum*, and is cultivated particularly in Barbadoes.

This plant flowers in June, but bears no seed; the young shoots from the roots serve to propagate it.

Hepatic aloes is obtained in the following manner:—The plant is pulled up by the roots, and carefully cleansed from the earth, or other impurities. It is then sliced and cut in pieces, into small hand-baskets or nets. These nets or baskets are put into large iron boilers with water, and boiled for ten minutes, when they are taken out, and fresh parcels supplied, till the liquor is strong and black.

At this period the liquor is thrown through a strainer into a deep vat, narrow at bottom, to cool, and to deposit its fæculent parts. Next day the clear liquor is drawn off by a cock, and again committed to the large iron vessel. At first it is boiled briskly, but towards the end the evaporation is slow, and requires constantly stirring to prevent burning. When it becomes of the consistence of honey, it is poured into gourds, or calabashes, for sale. This hardens by age.

2. Aloe spicata.—*Succotrine Aloes.*

About twelve years ago, Dr Fothergill sent this plant to Jamaica, for the Botanic Garden there; but, by the removal of the garden to a distant part of the country, this and several other valuable plants were lost. Had it been propagated, it would have proved a valuable acquisition to the island. The gum may be prepared as above.

3. Amomum Zinziber.—*Ginger.*

There are two sorts of ginger cultivated in Jamaica, viz. the white and the black.

The roots are perennial and digitated. Every spring they put forth tender shoots, of which are made the finest preserves.

Black ginger has the most numerous and largest roots, and only requires to be scalded and dried. The white ginger must be scalded in water, and the skin scraped off; then carefully dried. This last bears the best price.

Ginger is reckoned to impoverish lands greatly. This, with the trouble and fluctuating state of the markets, makes only a few people plant it in the mountains.

The virtues and uses of ginger are well known. In medicine it enters into many compositions, and merits still farther to be employed, as an useful succedaneum to the more costly spices. In Jamaica the common people employ it in baths and fomentations, with good success, in complaints of the viscera, in pleurisies, and in obstinate and continued fevers.

Besides the officinal ginger, there are several other species of ginger growing wild, differing in size, flowers, solidity and pungency of the roots, &c. viz.

1. Amomum Zerumbet.—*Wild Ginger.*
2. Costus arabicus.—*Great Wild Ginger.*
3. Alpinia racemosa.—*Mountain Wild Ginger.*

The roots of these are whiter, less pungent, and softer than ginger, and are often made into sweetmeats.

4. AMYRIS BALSAMIFERA.—*Rose Wood.*

This is found on gravelly hills, and rises to a considerable height. The trunks are remarkable for having large protuberances on them.

The leaves are laurel-shaped. The small blue flowers are on a branched spike. The berries are small and black.

Rose wood is an excellent timber: it is replete with a fragrant balsam or oil, and retains its flavour and solidity, though exposed to the weather many years.

Perhaps, by subjecting this wood to distillation, a perfume, equal to the *Oleum Rhodii*, may be obtained.

5. ANACARDIUM OCCIDENTALE.—*Cashew Tree.*

This beautiful and shady tree grows to twenty or twenty-five feet high. It blossoms early in the spring, and continues to flower for several months. The flowers grow on a branched spike: they are small, red, and fragrant.

It is somewhat singular that the nut or seed is first produced. It is of a kidney shape, and soon comes to its natural size; which, so soon as it does, the cashew-apple fills up in a few days, being attached to the cashew-nut.

Cashew-apples are red or white; when ripe they are soft, and their taste is agreeably rough and sweet. Stewed in syrup, they may be kept many months; and when eaten with milk, are highly restorative. When the apple is roasted gently and pressed, the juice, with that of lemons or limes, is made into punch.

Betwixt the external covering and the kernel there is a thick brown caustic oil. This is by some used to take off freckles; but it inflames so much, that the remedy is worse than the disease. It appears to be also volatile in its effects; for, if cashew-nuts are roasted in a close place, the operator's face

will be swelled, inflamed, and covered with a rash or erysipelas.

Roasted cashew-nuts are better than chesnuts; and when blanched in water, and freed from their covering, are as sweet as almonds, and are used like them for emulsions.

This tree is of speedy growth, as in one year from the sowing it blossoms and bears fruit. The tree lasts many years, and when old, yields a great quantity of transparent gum, in no way inferior to gum-arabic.

(This tree is not found wild in Jamaica, except where the seeds have first been planted by the human race. It grows to a middle size, and the trunk sends off many branches. The leaves are broad, smooth, and shining. The blossoms are numerous, but many of them are abortive. The white cashew-apple is the sweetest. When in bloom the whole tree is very beautiful.)

6. Andropogon litorale.

I saw this grass only on the sea-shore, near St Ann's Bay, Jamaica. It was five feet high, and had jointed stalks and roots, like the dog-grass of Britain.

A strong decoction of the roots has been successfully employed in visceral obstructions, given at the rate of three pints a-day: but in liver complaints it succeeds better, if accompanied by calomel in small doses.

7. Annona muricata.—*Sour Sop.*
———— squamosa.—*Sweet Sop.*
———— reticulata.—*Custard Apple.*
———— palustris.—*Water* or *Alligator Apple.*

All these grow wild in Jamaica, or are cultivated on account of their fruit.

The sour sop is a large fruit, of a heart-shape, pointed, and

beset with spines. When pulled off before maturity, and boiled, it is served at table the same as pompions; and if roasted or baked, is similar to yams. When ripe it is soft, sweet and detersive: hence good in fevers where the mouth is furred.

The sweet sop is an agreeable fruit; but the custard apple is eaten only by a few.

The alligator apple grows in rivulets. The root is spongy, and as light as cork: It makes excellent strops for razors.

The leaves of all smell strongly like savine, and both they and the fruits are anthelminthic.

(The sour sop grows as tall as an apple tree. The leaves are shining; the fruit large, crooked, prickly and pointed; the blossoms thick and fleshy. The fruit has a green skin; when ripe, it is soft and white, tastes sweet and slightly acid, and is relished by many people. It has many seeds. In times of scarcity, the apples pulled green, and roasted or boiled, are used as an article of food. The wild sour sop tree grows to a good size, and differs very little from this in leaves, flowers, or fruit. Sour sop leaves are used in decoctions to kill worms. The smell is similar to that of the savine.

The sweet sop tree seldom exceeds fifteen feet in height, and is well shaded with leaves. On the ends of the branches grow small fleshy blossoms, which cannot be well laid down in a collection of specimens. The fruit is round, and of an unequal surface. It has a sweet subacid taste, and contains a great many seeds, of the size of kidney beans.

The leaves of the custard apple are larger than those of the sour sop; the blossom of the same figure, but smaller; the fruit is round. When ripe it is yellow and soft like custard. Some are fond of it, but I am not singular when I pronounce it the worst of our fruits.)

8. Arachis Hypogea.—*Ground Nut.*

This is cultivated in gardens, and spreads on the ground. It has a yellow pea-blossom, and the pods are under the surface of the earth, containing two oblong seeds.

The toasted nuts are preferable to chesnuts. They yield, by expression, an oil as good as almonds; and, when beaten in a wooden or marble mortar, and mixed with water, form an excellent emulsion, not inferior to that of almonds, cashews, or any other.

9. Argemone mexicana.—*Yellow Thistle.*

This is a common and troublesome weed. The flowers are yellow; the leaves and stems prickly; and, when wounded, a yellow juice runs out, like a solution of gum gamboge. The pods are prickly, and contain a number of small black seeds; a woman's thimbleful of which are emetic; in a lesser dose they are purgative. They are used in diarrhœas and dysenteries.

(The gamboge thistle, or prickly poppy, rises to the height of three feet. The stem is herbaceous and hollow; the leaves are of a bluish green colour; the blossoms are pretty large, and of a deep yellow; the pods are shaped like those of the datura, and finely carved with cross spiral lines. I tried to evaporate the yellow juice, but it became an unsightly green.

The leaves have the virtues of the Carduus benedictus, and, if beaten into a pulp and mixed with lime juice, they make an excellent detergent in foul ulcers. The roots are said to be emetic.)

10. Aristolochia triloba.

——————— odoratissima.

Both of these are called *contrayerva*, and the latter is in

common use. It grows amongst the bushes : its flowers are large and mottled, and cannot fail to attract the notice of the most inattentive traveller.

The roots of this second species are long, equal, and as thick as a man's little finger : they have a strong scent, like the Radix contrayerva of the shops.

The natives of Jamaica use a tea or decoction of these plants in colds and other febrile complaints ; but as the whole genus is acrid and stimulating, this often does mischief ; especially where there is an inflammatory diathesis, or where proper evacuations have not been made.

11. Arum colocasia.—*White Cocoes.*

——— sagittæfolium.—*Black Cocoes.*

(Eddoes or *Toyos.)*

These two are cultivated as articles of food. The tap root is very large, and sends out shoots or fingers, which, when boiled or roasted, serve instead of bread. The parent root is boiled to feed swine. The roots yield a great deal of starch.

12. Arum Macrorhizon.—*Cubeso Wyth.*

This is a climber, and has large round leaves and long wythie roots, from which, when cut, a white milky resinous liquor runs out, of a strong turpentine smell.

13. Arum divaricatum.—*Parasitical Cocoes.*

This grows in the boughs of the tallest trees ; the leaves are like those of the cocoes.

The roots both of this and the last species are used in decoction, as sarsaparilla.

14. Arum arborescens.—*Dumb Cane.*

This grows in moist and swampy lands, and rises to six or

eight feet. Every part of it is acrid. The juice rubbed on the skin causes an intolerable itching. If eaten through ignorance or design, it irritates, and even inflames, the mouth and fauces, and renders the person speechless: hence the name.

A physician, in the reign of Charles the Second, wrote a treatise on the virtues of the dumb cane in dropsy. I have tried it in that disease, but could not get down a sufficient quantity to produce the proper effect, on account of its acrimony.

A Negro woman, who had been long ailing, in a fit of despair, ate a good deal of the dumb cane, with a view to destroy herself. It excoriated her mouth and throat much, and she voided many worms, but recovered her health soon after.

(The juice, boiled in hog's lard, makes a stimulating ointment for rubbing œdematous swellings, to which Negroes are often subject.)

15. Asclepias Curassavica.—*Bastard Ipecacuanha.*—*The Red Head.*

This is a pretty plant, which grows wild in pastures. It rises to three feet; has green stems and lanceolated leaves. The flowers stand at top in a kind of umbel; they are red and yellow, and very beautiful.

This plant is milky, but not dangerous, like some others of this genus. The juice of the leaves is often given to persons afflicted with worms, from a tea-spoonful to an ounce for a dose on an empty stomach. In this way I can vouch for its powerful and salutary effect. When given in larger doses it acts as a mild emetic or purgative; and in worm fevers also as a diaphoretic and diuretic. Thus, whilst it expels worms, it brings about a crisis.

The roots are white and woody. When given in powder, as a vomit, they act as an emetic; but this is a dangerous practice.

16. Bixa Orellana.—*Arnotta Bush,* or *Roucou of the Indians.*

This is planted about inclosures, and sometimes rises to twenty feet. The trunks are brown and smooth. The bark is tough, and, by maceration, may be made into a strong hemp or flax.

The flowers are pale red, and very like those of the dog-rose. The pods are oval, pointed, and prickly, containing a number of scarlet seeds.

When the pods are ripe they are gathered in baskets; and, when opened, the seeds are thrown into a tub of clean water. The water and seeds are well stirred, and the red adhering substance washed off the seeds; which last are thrown away. The turbid liquor is passed through a hair sieve, and evaporated in a pot over a slow fire to an extract, then made into rolls of a pound weight, which are dried in the shade, and then put up for use.

Arnotta sells at a high price: from fifteen to twenty shillings per pound. It is used as a dye; and in chocolate, to which it communicates a rich and agreeable flavour and taste as well as colour.

It has been found an useful medicine in nephritic and calculous cases. Half a drachm may be taken in a cup of chocolate twice or three times a day.

The Indians in Spanish America paint their bodies with arnotta.

(The arnotta bush is well shaded with green leaves. The blossoms are put forth in May. The pods are an inch and a half long, an inch broad, of a brown colour, and well defended from insects by numerous prickles. The plant is a native of Spanish America, and is cultivated in Jamaica for the vermilion-like powder contained in the pods.

As a medicine it is a gentle diaphoretic and diuretic; and, with this view, it is given in coughs, in gravel, strangury, rheumatism, and gout, and to hinder cutaneous eruptions from striking in.)

17. Bromelia Ananas.—*Pine Apple.*
——— Pinguin.—*Pinguins.*

Pine apples are cultivated in all the West India islands, and are raised in every hothouse in Britain. There are several varieties, but the sugar-loaf pine is the best.

Ripe pine apples are amongst the finest of our fruits in the West Indies, and are relished by all ranks of people, especially people sick of acute diseases, dysenteries, &c. They have a detersive quality, and are better fitted to cleanse the mouth and gums than any gargle whatever.

Besides being eaten raw, they are often candied with sugar, and sent home as presents. Pine apples are also made into tarts and pickles.

Pinguins are planted as fences. The fruit is as big as a plum. The juice is exceedingly detersive, and is often employed to clean the mouth. Thin slices with sugar are frequently given to children for worms; but much of it excoriates the mouth and passages.

18. Bursera gummifera.—*Jamaica Birch.*

This is frequent in woods, and grows speedily to a great height and thickness. The bark is brown, and very like the birch of Britain. The wood is soft and useless, except when pieces of the limbs are put into the ground as fences, when it grows readily, and becomes a durable barrier. It has yellow flowers; male and female on different trees. The fruit is a triangular capsule, which, when cut, discharges a clear balsam or turpentine.

On wounding the bark, a thick milky liquor is obtained,

which soon concretes into a resin, no way different from the *gum elemi* of the shops.

Dr Browne, and after him Linnæus, has mistaken the bark of the roots for the simarouba; of which hereafter.

(This turpentine tree delights in sandy situations. The leaves are of a light green colour, and grow in pairs; the blossoms branched, small, white, and brittle. The berries are brown, of the size of a hazel nut. When bruised, are very gummy, and smell like turpentine.)

19. Camocladia pubescens.—*Yellow Mastic.*

This is a fine tall timber tree, frequent in woodlands. The wood is yellow, hard, and takes a fine polish.

The whole of this genus is warm or peppery. The bark of the yellow mastic has an extraordinary taste, somewhat like ardent spirits, but more permanent, as, on chewing the smallest bit, one cannot get the taste out of the mouth for some hours.

The bark retains its pungency when dried, and, perhaps, may be found an useful medicine in lethargic and paralytic diseases, where stimulants are indicated.

20. Canella alba.—*Wild Cinnamon.*

This is a common tree in Jamaica, and grows to a great height. The leaves are oval, smooth, and shining: the flowers are small, red, and fragrant; they stand in form of an umbel, and are succeeded by black succulent berries, of the size of black currants. When ripe, they are sweet and aromatic: when gathered green, and dried, they are like black pepper, but hotter.

The bark is the canella of the shops. It enters into various officinal compositions, and is a warm, cordial, and aromatic medicine.

The habit and foliage of this tree are very like those of the true Winter's bark. Their sensible qualities, too, are nearly the same; and they appear to me to be species of the same genus.

(The leaves are the malabathrum of the shops. The bark is grey on the outside; the inner bark is of a cinnamon colour. The taste is very hot and peppery, and might be a useful substitute for some of the oriental spices; but, by obtaining it in Jamaica without expence, it is lessened in our esteem. Distilled with water, it yields little of its smell or taste, but gives them out perfectly with spiritous liquors.

In fevers and pleurisies, as well as in dropsical disorders, the Negroes boil this bark for a fomentation, and afterwards rub on some of the bark in powder. I have observed it commonly produce a lasting diaphoresis, and the aromatic fotus is of great service in the leucophlegmatia and ascites.)

21. CAPPARIS CYNOPHALLOPHORA.—*The Bottle Cod Root.*

This shrub is found in copses, and is disposed to run on bushes. It is remarkable for having large white flowers, whose stamina are of an extraordinary length. The pods are a foot long, and unequal. When ripe they open gradually, and shew the seeds in a sort of crimson bedding.

The root is large, yellow, and fleshy, and tastes strongly like horse raddish.

Dr CANVANE recommends it as a specific in dropsy. He orders a decoction of it; but an infusion is preferable, because boiling dissipates its virtues.

There are several other species of Capparis in Jamaica, whose sensible qualities are the same as those of the mustard tribe.

(This plant is also called the Egyptian Bean or Water Lily.

It grows in waste lands by the road side, into a shrubby tree. The white beans do not fall, being fastened by a crimson pulp.)

22. Capsicum.

Capsicum annuum.—*Cockspur Pepper.*
——— baccatum.—*Cherry Pepper.*
——— grossum.—*Gourd Pepper.*
——— frutescens.—*Bird Pepper.*
——— ——— (varietas.)—*Hen Pepper.*
——— galericulum.—*Bonnet Pepper.*

These, and some other varieties, are called Negro Peppers. The bird and hen peppers are indigenous; the others are cultivated in gardens; and all of them have the same sensible qualities, differing only in degrees of pungency. The bird pepper is the smallest, but hotter than any of the others.

All the capsicums may be preserved in vinegar, and form the best of pickles.

When nearly ripe they become red; and if gathered at this time, dried, and powdered, make Cayenne pepper. Some mix common salt; but this is improper, as it disposes the whole to deliquesce, and darkens the colour.

Capsicum has a warm and kindly effect on the stomach. It has all the virtues of the oriental spices, without producing those complaints of the head which they often occasion. In food it prevents flatulency from vegetables; but the abuse of it occasions visceral obstructions, especially of the liver.

In dropsical complaints, or others where chalybeates are indicated, a minute portion of powdered capsicum is an excellent addition.

In lethargic affections this warm and active stimulant might be of service. In tropical fevers a coma and delirium are common attendants; and, in such cases, cataplasms of capsicum have a speedy and happy effect. They redden the parts, but seldom blister, unless kept on too long.

In ophthalmias, from relaxation of the membranes and coats of the eyes, the diluted juice of capsicum is a sovereign remedy; and I have often witnessed its virtue in many obstinate cases of this sort.

In some parts of South America, the Indians prick the loins and bellies of hectic patients with thorns dipped in the juice of capsicum.

It has been alleged, that capsicum, applied to the loins, would occasion gonorrhœa. This is contrary to experience, and too ridiculous an opinion to combat seriously.

23. Cassia occidentalis.—*Piss-a-bed.*

This common weed has a disagreeable smell, like the leaves of all green cassias. The flowers are yellow; the roots fleshy, and used in aperient and diuretic decoctions.

24. Cassia fistula.—*Cassia Tree.*

This tree is cultivated in gardens and about settlements. It rises to about thirty feet, and has long flower spikes, with yellow papilionaceous blossoms. The pods are about two feet long, and as thick as a man's finger: they are black, smooth, and shining. This is the cassia fistularis of the shops, and the same as that brought from the East Indies. The pods of the Cassia Javanica, or horse cassia, are very large, and the pulp inferior to the former, which enters into some officinal compositions.

25. Cassia Senna Italica.—*The round-leaved Senna.*

This grows on sand banks near the sea, particularly on the palisadoes, near Port Royal in Jamaica.

It rises by herbaceous stems to two feet in height. From the axillæ at the top are sent forth slender spikes, with yel-

low blossoms. The pods and seeds are the same as those of the senna of the shops. I have dried the leaves, and used them in purging ptisans in the same proportion as those of the Alexandrian senna.

Specimens of this senna were presented to the Society of Arts; and although I received no marks of their approbation, it is with pleasure I observe they have offered a premium lately for raising the Alexandrian senna in the West Indies.

26. Cassia alata.—*Ringworm Bush.*

This plant is annual. The stem is woody, and rises to five or six feet. The leaves are winged, and look like those of walnuts. The flower spikes are simple; the blossoms large, yellow, and placed so closely as to form a cone. The pod is triangular, and four inches long: the seeds are numerous, and heart shaped.

Tetters or ringworms are frequent amongst the black people in Jamaica, and amongst the Spaniards in America very inveterate. I have seen this complaint so universal, that the habit was tainted; the skin looked leprous, and the unhappy patient had not a moment's ease from the intolerable itching or painful ulcers.

In the beginning, a poultice of the flowers of this bush is of service; as are also sulphureous applications. But, in more advanced stages of the disease, mercurials externally, and the decoction of woods, give the only chance of a cure.

(Dr Hill seems at a loss to describe this plant; and after all is mistaken in the number of the stamina. It sometimes grows to ten feet high, and, when in blossom, looks very well.)

27. Cassia chamæcrista.—*Cane Piece,—Sensitive Plant.*

This is frequently met with in cane-piece intervals. It is about three feet in height, and has a few branches, with nu-

merous small pinnated leaves, which collapse immediately on being touched. The blossoms are yellow. The capsule is a flat pod, about an inch long, black, jointed, and somewhat hairy. The roots are woody, with many fibres.

In Guinea, and in the West Indies, the negroes are dexterous poisoners. The plants they employ for this purpose are chiefly the lactescent ones, of the order *Contortæ*, viz. *Echites suberecta*, *Cameraria*, *Plumeria*, and *Nerium*. An antidote against these deleterious substances cannot be too much valued; and such an one is a decoction of the roots of this plant.

A handful of the washed roots being boiled in water from three pints to two, may be strained, sweetened, and used for common drink, at the rate of three quarts in twenty-four hours.

28. Cinchona Caribæa.—*Jesuit's Bark of Jamaica.*

Having given an account of this tree in the Philosophical Transactions, (vol. lxvii. p. 504.) with a figure, the reader is referred to that work. I may, however, add, that I have found trees in the parish of St James's, in Jamaica, fifty feet high, and proportionally thick. The wood is hard, clouded, and takes a fine polish. The bark of the large trunks is rough; the cuticle thick and inert; the inner bark thinner than that of the young trees, but more fibrous.

I have made use of this bark in all cases where the Peruvian bark was indicated, and with the greatest success.

Half an ounce infused in a bottle of white wine or spirits, affords an elegant and grateful bitter. In beginning Typhus I remove the sick into airy chambers, wash their hands and face often in cold water, and direct them to chew a little of this bark with very happy effects.

29. Cinchona triflora.—*The Bath Bark.*

This species of cinchona was discovered by Mr Roberts, a clergyman in Jamaica. The leaves are very like those of the Caribæa. At the axillæ come out three scarlet flowers. The pods are somewhat longer than those of the last mentioned species. The bark is of the colour of Peruvian bark. This tree grows only in the parish of Manchioneel, by rivers.

30. Cinchona brachycarpa.

Mr Lindsay, surgeon, and an expert botanist, discovered this species in the parish of Westmoreland, Jamaica, in 1785. It has much the appearance of the following, but very few flowers. It grew on the side of a steep hill.

Much has been said and written of late years on the Jesuit's bark. Sir Joseph Banks, many years ago, had an elegant plate engraven of the Cinchona officinalis, which he distributed to his friends. It was by this figure that I was enabled to ascertain and settle the Jesuit's bark of Jamaica, as well as the other species I have mentioned.

Of these species, the Cinchona Caribæa is the nearest to the officinal bark in virtue: it abates vomiting, and sits well on the stomach; whereas the other two species, like the St. Lucia bark, prove emetic in a small dose. They all, however, cure intermittents.

All these different species are in the possession of Sir Joseph Banks.

31. Cissampelos pareira.—*Pareira brava.*

This is a slip which runs amongst the bushes and on fences. The leaves are round, soft, and downy, on which account it is called the velvet leaf.

It bears its flowers on a slender pendulous spike: they are yellow and very small, and the male and female are on different vines. The fruit is a soft, flat berry: it is of a red colour, and contains one flat seed curiously notched like the wheel of a watch.

The roots are black, stringy, and as thick as sarsaparilla, running superficially under the surface of the ground.

This root is agreeably aromatic and bitter, and is recommended by GEOFFROY in nephritic disorders, in ulcers of the kidneys and bladder, in humoral asthmas, and in some species of jaundice.

The common people in Jamaica use a decoction of the roots for pains and weakness of the stomach, proceeding from relaxation.

32. CITRUS MEDICA.—*Limes.*
——— LIMONUM.—*Lemons.*

The whole of the genus citrus are natives of Asia, and the southern parts of Europe, from whence they have been carried to and planted in the warmer parts of America and the Sugar Islands. At present they are so common as to be formed into hedges.

The juice of lemons and of limes is nearly alike, and their uses in medicine and drink well known. About fourteen years ago I wrote a paper on the effects of lime juice, combined with sea-salt in various diseases in the torrid zone *. It is proper to observe, that in all the disorders there mentioned, a remitting fever either occasioned or accompanied them.

In that paper I have slightly mentioned diabetes; but later experience enables me to assert, that in this medicine I have found a specific for diabetes as well as for lienteria, both

* Vide American Transactions, Vol. ii. and London Medical Journal, vol. viii. p. 100.

which diseases have often heretofore baffled the most skilful physicians.

(The figure of the leaves, and structure of the flowers, are so much alike in the whole genus, that, with the exception of the lime, we cannot, with certainty, pronounce whether the young tree will bear an orange, shaddock, or forbidden fruit.

The lime tree is of smaller growth than the orange or shaddock, and the leaves are one-third less, and of a dark green colour. They blossom twice a year, and bear abundance of fruit, of a most delicious fragrance, yellow, smoother than a lemon, and large as a golden pippin. The juice is highly acid, and it is preferred to lemon juice.

The whole genus of citrus are pretty trees, especially when in bloom, or when the fruit is ripe. The author of The Sugar Cane finely observes:

> "Amid their verdant umbrage countless glow,
> With fragrant fruit of vegetable gold."

The antiseptic virtues of native vegetable acids are well known. In ardent fevers nature points out their use, and they should never be denied to the suffering patient. In bilious fevers, by uniting with the bile, they form a vegetable ammoniac, which, like other neutrals, is purgative, and carries the disorder off by stool. I prefer a beverage of the Seville orange juice to that of the rest.

Weak punch is the most common drink in the West Indies, and by far the best suited to the constitutions of the inhabitants. Those who use grog or rum, have sallow complexions, pains in their stomachs, frequent belly-aches, jaundice, dropsies, rheumatism, &c. After a residence of many years in these climates, I never knew any one who made a liberal use of acids, afflicted with any of the above disorders; but such, on the contrary, had clear complexions, and enjoyed good health.)

33. Citrus aurantium dulcis.—*Sweet Oranges.*
——————— amara.—*Seville Oranges.*

Both these are cultivated in all the West India Islands, as well as in Spain and Portugal. These ascescent fruits have long been esteemed in medicine, and need not here be insisted on. In the warm countries ulcers soon become very foul and offensive. I have long been of opinion that the habit has nothing to do in many such cases, but that both the ulcer and the fomes of it are merely local. I have applied the pulp of roasted oranges to the sores as a poultice, and observed always, that, in twenty-four hours, the fœtor of such ulcers was corrected and removed, and that the ulcers soon were disposed to heal. The same application was continued till a cure was completed.

34. Citrus decumana.—*Shaddock.*

This fruit was so called from a Captain Shaddock, who first brought it from the East Indies to Barbadoes.

Shaddocks are a most beautiful fruit, about five times as large as oranges, and shaped like a pear. They have a most agreeably sweet and bitter taste, and are much esteemed in warm countries.

35. Citrus decumana, (varietas).—*The Forbidden Fruit.*

This is smaller than the shaddock, and of a round figure. However beautiful to the eye, they are in general so bitter and sour as seldom to be eatable.

36. Citrus bergamot.

This is frequent in orchards: it is less than an orange, and has a fine smell.

37. Citrus citrullus.—*Citron.*

This fruit is about double the size of a lemon, but nearly

of the same shape. The juice is acid; the skin remarkably thick.

All the species of citron agree in some particulars. The leaves and flowers are nearly alike, and on their surface all of them have a volatile fluid, or oil, lodged in small round cells, visible to the naked eye. This essential oil is easily obtained by distillation.

The juice of limes, lemons, and oranges, is used in shrub, orangeat, and punch, and enters into many compositions in pharmacy and confectionry.

The rinds or skins of citrons, limes, and oranges, make elegant preserves, either in syrup, or candied with sugar.

38. CLINOPODIUM RUGOSUM.—*Wild Bachelor's Button.*

This plant is annual, herbaceous, and rises to three or four feet. The leaves are large, rough, and serrated; the flowers small, and the seed-vessels connected in a globular or button-like form.

The leaves of this, beaten and applied to old and obstinate ulcers, have a very good effect. The buttons, when rubbed betwixt the fingers, emit a most agreeable fragrance, somewhat like a mixture of the oils of rosemary, lavender, rhodium, and ambergris. As the plant is so common in all waste lands, large quantities might easily be gathered, and this valuable perfume, or oil, obtained by distillation. The dried pods retain their flavour a considerable time, and might be sent home in tin-canisters or lead-cases to the mother country.

39. COFFEA ARABICA.—*Coffee Tree.*

It is about sixty years since coffee was introduced into Jamaica from the Levant. It is now in general cultivation amongst even the meanest of the people. It flowers twice a year. The blossoms are white and sweet, like jasmine, and last a considerable time. These flowers, with the green fruit,

and red ripe berries on the same twigs, make a pleasing and beautiful contrast.

The fruit is a berry of the size and exact figure of the red cherry. The pulp is soft and sweet, and no doubt might be converted to wine; or, by distillation, to brandy. The beans are two in each berry, which are well known.

Coffee is an article of diet, and seldom prescribed in medicine; but I have known it have good effects in the moist or humoral asthma, and to give speedy relief in headachs, from gout and other nervous affections. It is said to prevent sleep; but this happens from any tepid liquors drank late in the evening or at night.

Coffee, with a good deal of milk, is used twice a day by most families in Jamaica.

40. CONVOLVULUS BRASILIENSIS.—*Sea-side Scammony.*

This plant grows near the sea shore. The leaves are broad and shining; the flowers large and pale red.

The roots are thicker than a quill, and run many yards superficially in sandy places. The whole plant is milky; and if this milk was collected, a resin, like scammony, might be obtained. At present this root is employed as a drastic purge, in dropsy, by the common people.

The Aleppo scammony might easily be cultivated in Jamaica, and become an useful and profitable article. It is growing luxuriantly in his Majesty's garden at Kew, and in several other gardens about London.

41. CONVOLVULUS BATTATAS.—*Sweet Potatoes.*

This slip is planted for food, and grows so fast as to be fit to dig up in six weeks or two months. For this reason, new settlers generally plant this as the readiest provision.

The roots have much the appearance of the common potato, but are much larger. These, roasted or boiled, are sweet, but not so farinaceous as the other potato, nor do they yield

so much starch by one half: however, the sweet potato is good substantial food, and serves instead of bread, which cannot always be had.

There is a vulgar opinion in Jamaica, that the common or English potato becomes sweet, and degenerates into this slip. The first is totally a mistake; the latter impossible.

42. Crescentia cujete.—*Calabash.*

This useful tree is planted about settlements. The flowers and fruit grow from the body or large limbs of the tree. The fruit, or calabash, is large and oblong. Some, when hollowed, will contain a gallon of water. The shell serves for utensils for the Negroes, as bowls, cups, and spoons.

The contents are white, pretty firm, and contain a number of seeds. The juice of calabash, in the quantity of four ounces, is given as a purge in all cases where the patient has received a bruise about the trunk; and a syrup of the same, with the addition of lime-juice, a little nitre, and paregoric elixir, is by some highly extolled in coughs and consumptions.

Small calabashes roasted, and the pulp spread on cloth, make a good poultice for bruises and inflammations.

A smaller calabash grows wild, but is only a mere variety of the other.

(The calabash has many branches from one root, seldom higher than twenty feet, and not thicker than eight inches. The wood is very tough and useful for ox-bows and cart-wheels. The leaves on the spreading branches are numerous, and of a deep green colour.

Dr Canvane observes, that, in consumptions, nothing can be more beneficial than the juice of the calabash. It is also a smart purge, and often administered in female obstructions.)

43. Croton eleutheria *.

This tree is common near the sea shore, and rises to about twenty feet. The leaves are from two to three inches long, and of a proportional breadth. On the upper side they are waved, and of a rusty colour; on the under side they are ribbed, and have a fine glossy or silvery appearance.

From the axillæ they have numerous small spikes, with a great quantity of white, small, and fragrant flowers. The capsule is tricoccous, like other crotons.

The bark is the same as the cascarilla and eleutheria of the shops. Medical writers have supposed these to be distinct barks, and they are sold in the shops as different productions; but, when strictly examined, they prove to be one and the same bark.

Linnæus's Croton cascarilla is the wild rosemary shrub of Jamaica, the bark of which has none of the sensible qualities of cascarilla.

44. Daphne lagetto.—*Alligator Bark,* or *Lace-Bark Tree.*

Sir Hans Sloane has figured a sprig of this tree, but did not see the flowers or seeds. Dr Browne, in his Natural History of Jamaica, is equally at a loss with respect to it; and botanists were unacquainted with this plant till the year 1777, when I brought complete specimens of it from Jamaica, and Sir Joseph Banks, Dr Solander, and myself, settled it as a species of Daphne.

The tree grows on the high rocky hills to twenty feet high. The trunks are straight; the wood is soft; the bark is thick, and may be separated into twenty or thirty lamina, white and fine, like gauze. Of this, caps, ruffles, and even whole suits of ladies' clothes, have been made.

It has the sensible qualities of mezereon, but in a greater

* *Clutia Eluteria*, Linn.

degree. A drachm of it to two pounds of sarsaparilla decoction is useful in confirmed lues, chronic rheumatisms, and pains of the bones from lues or the yaws.

45. Dioscorea alata.—*Negro Yam.*
——— bulbifera.—*White Yam.*
——— sativa.—*Wild Yam.*
——— triphylla.—*Yampee.*

The two first species are cultivated in provision-grounds; the slips are climbers, and furnished with poles, like hops. They are planted in the spring, and are ripe about Christmas. The roots are very large; some from thirty to forty pounds weight. They will keep for several months, and are in daily use as food. Yams, roasted or boiled, eat like potatoes, but are rather of a coarser texture. They are dressed in various forms, being boiled in soups or broth, &c. made into pudding, or roasted in the fire. They yield also a considerable quantity of starch.

The wild yam is a native of the woods in Jamaica. The stem is angulated, and finely serrated. If any one lays hold of this vine, it cuts the hand like a knife. The roots are flat, digitated, and large; they are yellow coloured, and very bitter: they purge people unaccustomed to eat them; but are the chief support of the runaway Negroes who abscond from the plantations.

The yampee, till of late years, was little known to the white inhabitants. The leaf is different from the others; the roots are about six inches long, and two inches in diameter: there are about twelve of such to one slip or vine. The Maroons, or mountain Negroes, plant them, and bring them down to the low lands. They keep a few weeks. The yampee, boiled or roasted, is a most delicious root, and far preferable to potatoes.

(The leaves and stem of the Negro yam are of a thicker texture than the white yam. The skin is black, and the roots

of a coarser texture than the white yam. No yam ought to be eaten before the vine withers, otherwise dysentery and diarrhœas may ensue, as happened in 1771, in the neighbourhood of Orangehill, Jamaica. These were of the putrid kind, producing cold sweats, with prostration of strength. Few were lost in my practice, provided they had proper nourishment.

The white yam is planted in December, and is dug up in the following April. The Negro yam is planted in May, and is ripe about Christmas.

The leaves of the Negro yam are smooth, shining, and of a deep green colour. They are furnished with a tendril, to lay hold of any bush or tree they may chance to meet with. The flowers are yellow. The roots are very large, some weighing twenty pounds. They are of an irregular figure, smooth, with a greyish skin; and when boiled or roasted, taste a good deal like the potato. Negroes of any reflection have a sufficient stock of yams, lest a hurricane should deprive them of their ordinary food.

The wild or wood yam is found growing spontaneously in the woods. The stem is prickly. The leaves are of a light green, and pretty broad. They grow in pairs and feel rough. The roots are large, flat, and broad; but, when boiled or roasted, taste bitter. Some Negroes eat them by choice.

The yampee grows in the lowland settlements of Jamaica. The leaf is like that of the wood-yam. The root is of a finer grain than other yams, and approaches nearer than any thing in Jamaica to English potatoes. They are cut for planting like potatoes. To each piece an eye must be left; and one or two of these pieces may be put into a little hill of mould.)

46. Dolichos pruriens.—*Cowitch.*

This slip runs wild amongst the bushes in many parts of Jamaica, and now and then is cultivated in gardens.

It is a climber, has slender stalks, the leaves trifoliated, the flowers small and papilionaceous. The pods are about four inches long, round, and as thick as a man's finger, containing a few hard oblong seeds.

The outside of the pods is thickly set with stiff brown hairs or bristles, which, when applied to the skin, occasion a most intolerable itching.

The ripe pods, when dipped in syrup, are scraped with a knife, and then thrown away. When the syrup, with these setæ, becomes as thick as honey, it is fit to use. It acts mechanically as an anthelminthic; occasions no uneasiness in the first passages, which are defended by mucus; and may be taken safely from a tea-spoonful to a table-spoonful once a-day.

47. Epidendrum Vanilla.

This plant is carefully cultivated in the Spanish West Indies, where it is a native. It also grows wild in the mountains of Jamaica. Dr Swartz, a learned Swedish botanist, found it there about three years ago.

The pod is a valuable perfume, and fetches a great price. It merits, therefore, the attention of the people, and their representatives in assembly, that it may be cultivated and sent home as an article of commerce.

48. Epidendrum claviculatum.—*Green Wythe.*

This plant is found on gravelly and rocky lands. It runs or creeps on the ground, taking root here and there in its progress. The stem is as thick as a man's finger, round, green, and succulent: it is jointed at every twelve or fourteen inches, and is several yards long, without leaves. The flowers are large and yellow; the pods two inches long.

On viewing the expressed juice with a glass, or the naked eye, we find it full of long spiculæ or hairs. Dr Drummond, a learned and ingenious physician and botanist in Westmore-

land, Jamaica, who first shewed me this plant, assured me that he had often given a table-spoonful of the juice as a safe and effectual vermifuge; and that in some species of dropsy it promotes a flow of urine, and cures the disease. The juice is in great esteem amongst the Negroes, for the cure of gonorrhœa and lues venerea.

49. Eupatorium Dalea.

This is frequent in the mountains of Jamaica. It is woody and perennial, and about four feet high. The flowers are yellow; the seeds downy.

The withered ears or leaves, just dried, have a most sweet smell, nearly equal to the vanilla; and we find them often amongst the Spanish cigaroes, as a perfume, instead of vanilla.

50. Fevillea scandens.—*Cacoons.*

This is common in all waste lands and by the skirts of the woods. It is a climbing vine, which runs on trees and bushes for a great way, covering them like ivy.

It has its male flowers on one vine, and the female on another. The blossoms are small and yellow. The fruit is a round calabash, containing about twelve large flat seeds or nuts. When the fruit is ripe, the seeds fall out at the bottom, from a round circular ring or trap-door.

The cacoon tastes very bitter, and is oily. The common people employ them as antidotes against vegetable and fish poison, as well as in pains and weakness of the stomach.

(I am so far from agreeing in this opinion, that I find the disorder rapidly advances under its use, and that the patient gets into a dropsy and dies.

Pain in the stomach is a very prevalent disease in Jamaica, and very little understood. Its seat is generally in the liver,

and if not speedily remedied, a suppuration ensues, a dropsy follows, or a hectic fever, which too often proves fatal. In the beginning of this disorder I give small doses of calomel, a grain at a time ; a little opium is necessary to prevent it running off by stool ; and after six doses, a laxative dose is given ; after a few days six doses more, and another purge, seldom fail to effect a radical cure. But after suppuration has taken place, calomel is very improper and often pernicious. Change of climate, milk diet, fruits and vegetables, would give the best chance of a recovery.)

The seeds, when beaten in a wooden mortar, and boiled long with water, yield an oil or fat, as white and hard as tallow ; and they are frequently used for this purpose at the Musquito Shore and Honduras, where candles are made of them.

51. GEOFFRÆA INERMIS.—*Cabbage-Bark Tree.*

In the sixty-seventh volume of the Philosophical Transactions, I have given a botanical and medical account of this tree, to which the Royal Society have added an elegant engraving.

The anthelminthic properties of this bark are pretty generally known ; and it is an article of materia medica in the Edinburgh Dispensatory, as well as in some foreign Dispensatories.

Let me in this place remark, that physicians expect too much from anthelminthics. The common symptoms of worms are often delusory, for the same symptoms attend many fevers. When, therefore, the case is doubtful, I always join the Cinchona officinalis or caribæa with the cabbage bark.

Worms expelled in the end of acute diseases, are in gene-

ral a fatal symptom; and no worm medicine should then be given, unless the bark is given at the same time.

52. ABRUS PRECATORIUS.—*The Bead Vine.*

This beautiful plant runs on bushes or fences. It has numerous small and pinnated leaves. The flowers are papilionaceous, and pale red; the pods short and rounded, containing three or four red shining small peas, with a black speck at the end.

The leaves and stalks are sweet, and often made into teas or decoctions, to which is added a little lime juice. This drink is useful in coughs, colds, and pleurisies, &c.

The seeds are exceedingly hard, and are emetic; they are never eaten or prescribed. They are common in shell shops and shell works, and are worn as beads by the Negroes in Jamaica.

(This beautiful plant, otherwise called wild liquorice, grows in pimento walks, and runs on trees and bushes. It will also grow in gardens, and might with proper supporters be formed into beautiful arbours. The leaves are of a lively green colour, and have a very sweet taste like liquorice. They are made into tea for coughs, pleurisies, and peripneumonies.

This year we had an epidemic peripneumony, which was very fatal, especially among the Negroes. It raged for three months. Early and repeated bleedings, antimonials, diluted drinks of liquorice, pear leaf and nitre, with blisters to the sides, were attended with great success; but if these had been neglected, or sparingly administered, calomel, with gentle opiates, acted like a charm in resolving the disease; and a spermaceti mixture with salt of hartshorn completed the cure. By this mode of treatment, I lost no patients, although I had many under my care. The epidemic was prevalent in March, April, and May.)

53. Gouania Domingensis.—*Chaw Stick.*

This vine runs wild in fences and in copses. The stalks are woody, flexible, and of the size of one's finger; they run to a considerable length, and continue of the same thickness. The leaves are oval, and serrated; the flowers small and white; the capsules small, flat, and white.

Pieces of chaw stick are made into tooth brushes, and, while they serve to clean the teeth, are antiseptic by their bitterness.

This wythe is chewed, and the juice swallowed as an agreeable stomachic; and is useful for promoting an appetite, or removing pains in the stomach from relaxation of that viscus.

What is often called a pain in the stomach is an affection of the liver, which should carefully be distinguished, as in this case all tonics or bitters do mischief. If the liver is diseased, we have a sovereign remedy in calomel. One grain for six nights running is generally sufficient.

(This plant is often also used with propriety in decoctions for fevers of the bilious remitting or intermitting kind. The putrid matter in the intestines is thus corrected, and the stomach made strong enough to retain the Peruvian bark.)

54. Guaiacum officinale.—*Lignum Vitæ.*

This is a native of the West Indies, and grows slowly to a middling size and thickness. Its shady ever-green foliage, its numerous azure flowers, and flat yellow pods, make a pleasing contrast.

The trunks are commonly crooked; the bark is furrowed, and tears of the gum exude. All the parts of this tree are acrid and disagreeable to the taste; and as they contain more or less resin, are purgative, diaphoretic, or diuretic.

Besides the tears found on the trunk, a gum is obtained in the following manner:—The trunk and larger limbs being

sawn into billets of about three feet long, an auger hole is bored lengthways in each, and one end of the billet so placed on a fire, that a calabash may receive the melted resin which runs through the hole as the wood burns.

Gum guaiacum may be obtained in small quantities by boiling chips, or sawings, of the wood in water and common salt. The resin swims at the top, and may be skimmed off.

It may also be got by means of ardent spirits, in the way Jalap and Peruvian bark are treated; but this mode is expensive and tedious.

The venereal disease makes terrible havock amongst the Negroes in Jamaica, and shews itself in all its hideous forms. This is owing to their ignorance or neglect. Amongst this class of mankind it is too common to stop virulent gonorrhœas with astringent gums, resins, or barks, so that the master or overseer knows nothing of their situation till the spongy bones of the nose, the palate, or the throat, are greatly affected; or their limbs distorted by nocturnal pains, pains of the bones, nodes, and carious ulcers.

The yaws, though a very different disease from the lues venerea, often produces the same direful effects in the limbs, nose, and throat: happily, however, these are curable by mercurial alteratives and diaphoretic decoctions.

Of all the preparations of mercury, the corrosive sublimate appears to me to be the best for curing such inveterate disorders, especially when accompanied with such medicines as promote its natural tendency to the skin. Of this sort is guaiacum and sarsaparilla. I have found the following formula the best:

Gum guaiacum, ten drachms.
Virginia snake root, three drachms.
Pimento, two drachms.
Opium, one drachm.
Corrosive sublimate, half a drachm.
Proof spirits, two pounds.

To be mixed and digested for three days, and then strained. Two tea-spoonfuls of this tincture given in half a pint of sarsaparilla decoction twice a day, will, in general, remove every symptom of lues or yaws in four or five weeks.

(Decoctions of the wood are often used for ordinary drink; and a fermented liquor, under the name of *mably*, is sold to the sailors about Port Royal, which is a mixture of a little ginger and muscovado sugar, with the decoction.)

55. HÆMATOXYLUM CAMPECHIANUM.—*Logwood.*

Dr BARHAM introduced the seeds into Jamaica from Honduras about the year 1715. It is at this time too common, as it has overrun large tracts of land, and is very difficult to root out.

This is generally planted for hedges, and it makes a beautiful and strong fence against cattle or stock. If pruned from the lower branches, it grows to a sizeable tree, and, when old, the wood is as good as that from Honduras.

The trunks and branches have long, sharp spines; the leaves are heart-shaped; the flowers, on a spike, are yellow, tipped with crimson, smell sweet, and are exceedingly beautiful. The pod is flat, and contains two or three smooth long seeds.

Logwood trees are cut up into billets or junks, the bark and white sap of which are chipped off, and the red part, or heart, sent to England for sale.

As a dye and a medicine, it is well known.

(A person just arrived from Britain would be apt to call this a white thorn; and indeed it has a great resemblance to it in its leaves and branches, but when in blossom their appearance is very different. It may perhaps have been originally brought from Honduras, but it grows so luxuriantly in Jamaica that it may be regarded as a native plant. It serve

better for the protection of the sugar cane than the penguin, which harbours rats; and better also than lime bushes, which are liable to mildew, and afterwards to communicate the disease to the canes.

Logwood trees seldom grow thicker than a man's thigh. A clear amber coloured gum is found on the trunks, which is insipid to the taste, and may, I believe, have similar virtues with the gum-arabic.)

56. Hibiscus esculentus.—*Okra.*

This is cultivated in gardens and inclosures as an article of food. It rises to five or six feet; has broad leaves, and yellow large flowers. The pod or okra is from two to six inches long, and one inch diameter. When ripe, it opens longitudinally in five different places, and discharges a number of heart-shaped seeds.

The whole of this plant, like others of the *columnifera*, is mucilaginous, especially the pods. These are gathered green, cut into pieces, dried, and sent home as presents, or are boiled in broths or soups for food. It is the chief ingredient in the celebrated pepper-pot of the West Indies, which is no other than a rich olla: the other articles are either flesh meat or dried fish and capsicum. This dish is very palatable and nourishing.

As a medicine okra is employed in all cases where emollients and lubricants are indicated.

(The trunk of the okra is thicker than a walking stick, and it sometimes grows ten or twelve feet high. The trunk is woody, and has a large pith in the middle. The leaves are broad, of a deep green colour. The pods are long and furrowed; and when ripe they open at the grooves and discharge their black seeds. All ranks are fond of this vegetable, and it is justly reckoned nourishing and restorative.

The fresh green sticks put in water for a week yield a white strong hemp, and that in no small quantity.)

57. JATROPHA JANIPHA.—*Sweet Cassada.*
——— MANIHOT.—*Bitter Cassada.*

Both these are cultivated as articles of food. It is difficult to distinguish the bitter from the sweet cassada by the roots; but it will be best to avoid those of the cassada that bears flowers, as it is the bitter which is poisonous when raw.

The root of bitter cassada has no fibrous or woody filaments in the heart of the root, and neither boils nor roasts soft. The sweet cassada has all the opposite qualities, and is daily served up at table as bread.

Cassada bread is made of both the bitter and sweet, thus: —The roots are washed and scraped clean; then grated into a tub or trough; after this put into a hair bag, and strongly pressed, and the meal or farina dried in a hot stone-basin over the fire: lastly, made into cakes. These make most excellent puddings, equal to millet.

The scrapings of fresh bitter cassada are successfully applied to ill-disposed ulcers.

Cassada roots yield a great quantity of starch, which the Brazilians export in little lumps, under the name of *Tapioca.*

(Sweet cassada grows three or four feet high. The stem is as thick as a walking stick, knotted and jointed. The leaves are like those of the cotton tree or ceiba, and of a dark green colour. This sort of cassada seldom or never blossoms. The plant is propagated from the stem, by laying a few joints in the earth. The roots are large, and grow spreading like a bird's foot. These roots roasted or boiled, are very good to eat.

The bitter cassada grows ranker than the sweet; and the trunks and roots are much thicker. The plant is generally

cultivated in the French islands, and by many also in Jamaica. The roots in their natural state are a very virulent poison, and without speedy relief death soon ensues. It has long been observed, and the fact is curious, that hogs rooting up this plant, and eating it with the mud about it, suffer no injury; but if the roots are washed and given to them, it presently kills them.

As soon as it is known that bitter cassada has been eaten, the poison must be expelled by vomit and stool, and either may be promoted by repeated draughts of warm muddy water.

The bitter cassada, although it proves so destructive in a recent state, yet, by a little art, it becomes a wholesome food. It is the juice of the roots alone that is poisonous. The fresh washed roots are grated over a tub of water; and are afterwards repeatedly washed in fresh supplies of water. The meal is then dried in the sun, or in a stone basin over the fire, and made into broad thin cakes. This bread tastes like oat-cakes; and, when toasted and buttered, forms an excellent tea-bread.

The water employed in washing the grated roots is not to be thrown away, but suffered to settle. The sediment makes a fine clear starch.)

58. JATROPHA GOSSYPIFOLIA.—*Belly-ache Bush.*
——— CURCAS.—*English Physic Nut.*
——— MULTIFIDA.—*French Physic Nut.*

The first grows wild; the second is planted around Negro gardens; and the third is cultivated as an ornamental shrub.

A decoction of the leaves of the two first is often used with advantage in spasmodic belly-ache, attended with vomiting. It sits easier on the stomach than any thing else, and seldom fails to bring about a discharge by stool.

The seeds of all of them are drastic purgatives and emetics. They yield, by decoction, an oil of the same uses and virtues as the Oleum ricini; of which hereafter.

(The belly-ache bush is low and jointed. The stem is herbaceous, and it sends off several branches, which spread along the earth. The small blossoms are red; the pods as large as nutmegs, containing three grey seeds. The leaves are succulent, and of a deep green. The common people boil them, and give them with butter for the cure of belly-ache.

The English physic nut is of speedy growth. It grows to the height of from five to ten feet. The trunk is grey and knotted; the leaves of a lively green. The yellow blossoms are small, and grow in clusters. The nuts are as large as walnuts, and of a yellowish cast. When ripe they contain three kernels. The drastic and emetic qualities of the nut are said to be owing to a thin membrane which divides the kernels and that it may safely be eaten when the membrane is removed.

The French physic nut, or castor-oil nut-tree, is a beautiful plant, and grows in the gardens of the curious to the height of three feet. The trunks are knotted. The leaves are deep green, and finely compounded. The cluster of red flowers is terminal. The fruit is of the bulk of a walnut, and contains three seeds. These nuts are sweet and purgative.)

59. LAETIA APETALA.—*Gum-Wood.*

This tree is common in woodlands and copses; it rises to a considerable height and thickness. The trunks are smooth and white; the leaves are three inches long, a little serrated, and somewhat hairy. The stamina are yellow, without petals; the fruit is as large as a plum, and, when ripe, opens and shews a number of small seeds in a reddish pulp.

Pieces of the trunk, or branches, suspended in the heat of the sun, discharge a clear turpentine, or balsam, which concretes into a white resin, and which seems to be the same as gum sandarach.

Of this we make pounce; and it appears to me that this turpentine or gum might be useful in medicine, like others of the same nature.

60. LANTANA CAMARA.
——— ACULEATA. } *Wild Sage.*
——— INVOLUCRATA.—*Sea-side Sage.*

The first grows wild amongst the bushes, and is remarkable for the beauty of its flowers, which are yellow, tinged with red.

The second has small white flowers, and dark-coloured rough leaves; it also grows wild.

The third species is found near the sea. It is a low plant; has small ash-coloured leaves, and a most agreeable smell.

The leaves of all these lantanas, and particularly of the sea-side sage, are used by the black people in teas, for colds, rheums, and weakness of the stomach. They are also used with alum in gargles.

61. LAURUS CINNAMOMUM.—*Cinnamon Tree of Ceylon.*

This Noble plant, with other valuable ones, was taken in a French ship, and Admiral Rodney, ever attentive to the prosperity of Jamaica, presented them to the assembly of that island.

One of the trees was planted in the botanic garden in St Thomas in the East; the other by Hinton East, Esq. in his noble garden at the foot of the Blue Mountains. From these parent trees some hundreds of young trees are already produced, from layers and cuttings, and dispersed to different parts of the country, in all which it thrives luxuriantly, with little trouble; we may therefore hope it will soon be a valuable addition to our commerce.

The smallest bit of the bark is quite a cordial. The cinnamon we have from Holland is often inert, and gives room to suspect that it has been subjected to a slight process in distillation.

62. Laurus camphora.

This tree is another of the captured plants given to the inhabitants of Jamaica. It is common enough in greenhouses in Britain.

If cultivated with care, it will also be an acquisition. Camphor, though solid, is the essential oil of this tree, and is obtained by distillation in the East Indies.

63. Laurus Sassafras.

This is a native of North America, and grows luxuriantly in Mr East's garden. When propagated, it will also be an article of trade from Jamaica.

The roots, and their bark, are used in medicine, and the flowers are made into tea, in America, as the rasping of the wood is with us. The sassafras roots and bark are an excellent ingredient in the decoction of woods.

64. Laurus Persea.—*Alligator Pear.*

This tree has neither the habit nor sensible qualities of the genus Laurus: the flowers, however, have all the generic characters of it.

The alligator pear-tree is cultivated universally by all ranks of people. It runs speedily to twenty-five or thirty feet in height. The leaves are long, oval, and pointed; the flowers yellow and small. The fruit is pear-shaped, and from one to two pounds in weight.

On removing a green skin or covering, we come to a yellow, butyraceous substance, and in the heart find a large round seed or stone. It is unequal in the surface, and exceedingly hard and woody.

This fruit is ripe in August and September, and constitutes one of the most agreeable articles of diet, for six or eight weeks, to the Negroes. These pears, with a little salt

and a plantain or two, afford a hearty meal. They are also served up at the tables of white people as a choice fruit. When the pear is ripe, the yellow or eatable substance is firmer than butter, and tastes somewhat like butter or marrow: hence it is called by some the vegetable marrow. But, however excellent this fruit is when ripe, it is very dangerous when pulled and eaten before maturity. I have repeatedly known it to produce fever and dysentery, which were removed with difficulty.

The leaves of this tree, and those of the bead-vine or wild liquorice * are made into pectoral decoctions by the common people.

The large stone is used for marking linen. The cloth is tied or held over the stone, and the letters pricked out by a needle through the cloth and into the seed. The stain is a reddish-brown, which never washes out.

(The trunk is covered with a grey bark. The leaves are shining, numerous, and of a lively green colour. What is uncommon, the flowers are proliferous, for, after the first blossoms appear, young leaves shoot out from the middle of the flowers. The fruit is of two kinds, the green and the red. The former is preferred. It is eaten with bread, salt, and pepper. Its taste is like that of butter or marrow, but is considerably more palatable. Europeans at first do not generally like it; but they soon acquire a relish for it. It constitutes a principal part of the food of all classes; and it is eaten greedily by the lower animals, from horses, cattle, and poultry, to lizards and insects.)

65. Malvaceæ (Ordo naturalis.)

Under this title we may comprehend the whole tribe of plants in the sixteenth class of Linnæus, and the natural or-

* Abrus precatorius.

der *Columniferæ*. All of them are mucilaginous, saponaceous, and emollient, and may safely be employed where mucilaginous and emollient medicines are indicated.

A decoction of the common broomweed * in the West Indies, or of the various species of Sida, may properly be substituted in the room of marshmallow roots.

Many of them yield gums, which are of a similar nature to that of the cashew. Some are used as food, and are highly restorative. We spoke of this above, under the name of Hibiscus esculentus, Okra.

66. MARANTA ARUNDINACEA.—*Indian Arrow Root.—The Starch Plant.*

This is cultivated in gardens and in provision-grounds. It rises to two feet, has broad pointed leaves, small white flowers, and one seed.

The roots, when a year old, are dug up, well washed in water, and then beaten in large deep wooden mortars to a pulp. This is thrown into a large tub of clean water. The whole is then well stirred, and the fibrous part wrung out by the hands, and thrown away. The milky liquor being passed through a hair-sieve, or coarse cloth, is suffered to settle, and the clear water is drained off. At the bottom of the vessel is a white mass, which is again mixed with clean water, and drained: lastly, the mass is dried on sheets in the sun, and is pure starch. (The starch or flower is often baked into cakes, with eggs and butter, or boiled into pap or gruel.)

A decoction of the fresh roots makes an excellent ptisan in acute diseases.

(The leaves are broad, smooth, pointed, and of a lively green colour. The flowers are small and white. The roots are white, and jointed like the arrows of the Indians. The

* Sida alnifolia and rhombifolia.

plant is propagated by dividing the roots, and is fit to be dug up in nine or ten months from the time of planting. The roots send out numerous branches, and are thicker than a man's thumb.)

67. Mimosa tortuosa.—*Poponax Bush.*
——— Nilotica. } *Gum-arabic Trees.*
——— Senegal. }

The first of these has probably been imported, and at present grows too abundantly, as it is a thorny troublesome bush.

The others have been lately introduced from Guinea. They are trees of about twenty feet high. I saw them in the garden of Dr Paterson, at Green Island, Jamaica. The Nilotica, on being cut a little, yielded a good deal of transparent gum.

These several species have small pinnated leaves, which are nearly as sensible, on being touched, as those of the Mimosa pudica. The flowers are yellow buttons, which, when rubbed, are very fragrant. All of them afford gum-arabic in lesser or greater quantities, and more or less transparent.

68. Mirabilis Jalapa.—*Four o'Clocks.*

This is frequently met with in the gardens of the curious in Great Britain. It grows wild in Jamaica, and is a troublesome weed. Some have red flowers, some yellow, and others flowers finely variegated.

It has a large tap-root, which, when cut across, is not unlike that of jalap; but when dried, is white, light, and spongy. It requires to be given in a great quantity to operate as a purge, and is probably the mechoacanna of the ancients, but not the jalap, which belongs to the genus Convolvulus.

69. Musa paradisiaca.—*Plantain Tree.*
——— Sapientum.—*Banana.*
——— troglodytarum.—*Wild Plantain.*

The plantain tree is cultivated on a very extensive scale in Jamaica. The fruit is the chief support of the inhabitants.

The leaves are six or eight feet long, and from two to three feet broad. The flowers are from a spatha, and are covered with purple deciduous calyces. The fruit or plantains are about a foot long, round, and a little bent. When ripe, they grow yellow, soft, and sweet. The seeds are larger than mustard, dark coloured, and numerous; they never vegetate; the tree is propagated by shoots.

Plantains are cut when full grown, but before they are ripe. The green skin is pulled off, and the heart is roasted in a clear fire for a few minutes, and frequently turned: it is then scraped, and served up as bread. Boiled plantains are not so palatable.

The banana-tree bears a smaller fruit than the plantain. It is never eaten green; but when ripe it is very agreeable, either eaten raw, or fried in slices as fritters.

Plantains and bananas are eaten by all ranks of people in Jamaica; and but for plantains the island would scarcely be habitable, as no species of provision could supply their place. Even flour, or bread itself, would be less agreeable, and less able to support the laborious Negro, so as to enable him to do his business, or to keep in health.

Plantains also fatten horses, cattle, swine, dogs, fowls, and other domestic animals.

The wild plantain has no fruit eatable. The leaves of all the species are nearly alike; and as they are smooth and soft, they are employed as dressings after blisters.

The water from the soft trunk is astringent, and employed by some to check diarrhœas.

Every other part of the tree is useful in different parts of rural economy.

(Towards the base of the trunk, its diameter is about ten inches. It tapers to the height of ten or fifteen feet, where it sends off leaves. The young leaves are rolled up in a curious cylindrical manner. They are very soft, and seem to be intended by nature as a cooling dressing in scalds, and after blisters. The tree is truly foliaceous. On pulling a leaf, you may strip the tree from top to bottom. The blossoms are in rows, covered by a thick purple spatha. Ripe plantains sliced and fried, resemble pancakes.

On stripping the shreds of plantain-bark, we get a fine filamentous substance like silk, which has been found to be capable of being wrought into various stuffs. On cutting the pith, a portion of this cotton adheres to the knife.)

70. Myrtus Pimento.—*Allspice, Jamaica Pepper,* or *Pimento Tree.*

This is a native of Jamaica, and grows in all the woodlands on the north side.

Pimento-walks are upon a large scale, since they contain at times some hundred acres of ground. This is one of the staple articles of Jamaica.

This tree has bay-leaves; the flower resembles that of the elder. The fruit is a black berry, as big as a black currant when ripe, and contains two grey smooth seeds.

As soon as the berries are of the proper size, and just before they begin to be ripe, a number of hands are employed to gather them. They are then dried on platforms or sheets, and afterwards put up in bags of one hundred weight, for the European market.

Pimento possesses the flavour and qualities of all the eastern

spices: it enters into many of the officinal preparations, and is the chief ingredient in the marischal hair-powder.

71. Passiflora hexangularis.—*Granadilla.*
——— maliformis.—*Water Lemon.*
——— Laurifolia.—*Sweet Calabash.*

All these species are cultivated in Jamaica. They are all eatable; but the pulp of the ripe granadilla is very delicious. Their taste is sweet and subacid, and relished by almost every body, particularly by the sick in acute continued fevers.

The thick rind of unripe granadilla is often made into pickles, or preserved with sugar as sweetmeats.

72. Passiflora rubra.—*The Dutchman's Laudanum.*

This is a strong woody vine that mounts the tallest trees, and sends forth vast numbers of crimson flowers. The fruit is black, and of the size of a cherry.

A Dutch physician, who lived in Hanover Parish, performed some remarkable cures in fevers, by the use of the flowers and berries; but opium has superior virtues; and the other is now laid aside as an anodyne of less advantage.

(When the berries are ripe, they split open like a star, and discharge a sweet pulp, with many small seeds.

On breaking the stalks, a white milky juice runs out. The slip, when eaten with other plants, is poison to hogs.

By some persons this vine is held in great esteem, as a mild and safe opiate in fevers, where opium would be unsafe. Twenty-four of the blossoms infused in hot water, and drank at twice, is a dose; or twelve of the berries eaten are said to have the same effect. Great caution, however, is required in its use, as it proves so pernicious when eaten by the brute creation.

Gentlemen of the faculty who reside in warm climates, are

greatly obliged to our countryman Dr LIND, for his essay on the disorders incident to strangers in warm climates. Laudanum is recommended to remove the hot fits of intermittents, and to promote sleep and perspiration. Fresh air in all disorders is insisted on; and this method is attended with amazing success. Thousands of lives will annually be saved by these salutary admonitions.)

73. PICRANIA AMARA *.—*Bitter Wood.*

This is a tall and beautiful timber tree, which is common in the woods in Jamaica. Sir JOSEPH BANKS had sprigs of the flowers and seeds in spirits, from me, and we found it a new genus, belonging to the *Pentandria Monogynia* of LINNÆUS. The name is expressive of its sensible qualities.

Every part of this tree is intensely bitter; and even after the tree has been laid for floors many years, whoever rubs or scrapes the wood, feels a great degree of bitterness in their mouths or throats. Cabinet work made of this wood is very useful, as no insect will live near it.

This tree has a great affinity to the Quassia amara of LINNÆUS; in lieu of which it is used as an antiseptic in putrid fevers. When used, less of it will do than of the Quassia amara of Surinam.

74. PIPER AMALAGO.—*Black Pepper of Jamaica.*
——— INÆQUALE.—*Long Pepper of Ditto.*

These, and some other species, are indigenous, and known by the names of Joint Wood, or Peppery Elders.

The first bears a small spike, on which are attached a number of small seeds of the size of mustard. The whole of the plant has the exact taste of the East India black pepper.

The long pepper-bush grows taller than the amalago. The

* Quassia excelsa.

leaves are broad, smooth, and shining. The fruit is similar to the long pepper of the shops, but smaller.

The common people in Jamaica season their messes with the black pepper.

To preserve both, the fruit may be slightly scalded when green, then dried, and wrapped in paper. Perhaps hereafter they may be deemed worthy of attention.

(The Piper amalago must be gathered before it is quite ripe, and dried in the sun like pimento.

The blossoms of the Piper inæquale are disposed on a spike of two inches, beset with small and almost imperceptible florets, of a duskish white hue. The fruit is of the size, and every way like, the long pepper brought from the East Indies. When green it is very hot, but loses its pungency on drying. We have not the method of curing it properly; for, when dried ever so often, it again grows moist.)

75. Portlandia grandiflora.

Dr Browne has described this plant, and given a good figure of it. It has frequently flowered in the King's garden at Kew, and in Dr Pitcairn's at Islington.

The external bark is remarkably rough, furrowed, and thick: it has no taste. The inner bark is very thin, and of a dark brown colour. Its taste is bitter and astringent, and its virtues are the same as those of the Jesuit's bark. Infused in spirits, or wine, with a little orange peel, it makes an excellent stomachic tincture.

76. Ricinus communis.—*Palma Christi.*—*Castor-oil Nut Tree.*

This tree is of speedy growth, as in one year it arrives at its full height, which seldom exceeds twenty feet. The trunk is subligneous; the pith is large; the leaves broad and pal-

mated; the flower spike is simple, and thickly set with yellow blossoms, in the shape of a cone; the capsules are triangular and prickly, containing three smooth grey mottled seeds.

When the bunches begin to turn black, they are gathered, dried in the sun, and the seeds picked out. They are afterwards put up for use as wanted, or for exportation.

Castor oil is obtained either by expression or by decoction. The first method is practised in England; the latter in Jamaica. It is common first to parch the nuts or seeds in an iron pot over the fire; but this gives the oil an empyreumatic taste, smell and colour; and it is best prepared in this manner:—

A large iron pot or boiler is first prepared, and half filled with water. The nuts are then beaten in parcels, in deep wooden mortars, and, after a quantity is beaten, it is thrown into the iron vessel. The fire is then lighted, and the liquor is gently boiled for two hours, and kept constantly stirred. About this time the oil begins to separate, and swims on the top, mixed with a white froth, and is skimmed off till no more rises. The skimmings are heated in a small iron pot, and strained through a cloth. When cold, it is put up in jars or bottles for use.

Castor oil, thus made, is clear and well flavoured, and, if put into proper bottles, will keep sweet for years.

The expressed castor oil soon turns rancid, because the mucilaginous and acrid parts of the nut are squeezed out with the oil. On this account I give the preference to well prepared oil by decoction.

An English gallon of the seeds yields about two pounds of oil, which is a great proportion.

Before the disturbances in America, the planters imported train oil for lamps and other purposes, about sugar works.

It is now found that the castor oil can be procured as cheap as the fish oil of America: it burns clearer, and has not any offensive smell. This oil, too, is fit for all the purposes of the painter, or for the apothecary in ointments and plasters.

As a medicine, it purges without stimulus, and is so mild as to be given to infants soon after birth, to purge off the meconium. All oils are noxious to insects, but the castor oil kills and expels them. It is generally given as a purge after using the cabbage-bark some days.

In constipation and belly-ache this oil is used with remarkable success. It sits well on the stomach, allays the spasm, and brings about a plentiful evacuation by stool, especially if at the same time fomentations, or the warm bath, are used.

Belly-ache is at present less frequent in Jamaica than formerly, owing to several causes. The inhabitants, in general, live better, and drink better liquors; but the excessive drinking of new rum still makes it frequent amongst soldiers, sailors, and the lower order of white people. I have known it happen too, from visceral obstructions after intermittents, or marsh fevers, in Jamaica.

(There are three kinds of the Palma Christi, which can only be distinguished by the fruit. 1*st*, The rough, large and prickly skinned oil-nut. 2*d*, The small prickly oil-nut; and, 3*d*, The smooth skinned oil-nut. The two first-are the best; the last being often useless.

The castor-oil nut-tree grows wild in the West Indies. It is cultivated in the gardens of the curious in Europe. In Jamaica it is triennial. The leaves are broad, shining, and of a deep green colour. The berries when dry, open in three compartments, and contain three rounded seeds, of the size, shape and colour of a tick; hence its Latin name.

On exposure to the sun, the pericarpium splits open, and

the seeds fly out. The oil is best obtained by expression, although the method by decoction is more in use. If the pounded nuts are boiled in salt water, they will yield more oil, and more speedily, than in fresh.

A medicine of this sort was long wanted. Without heating or stimulating the intestines, it sheaths them, while it evacuates their contents.

I give two spoonfuls every two hours in belly-aches or constipation of the bowels. In diarrhœas and dysenteries attended with pains, bloody stools and tenesmus, this medicine commonly gives relief. It may also be given with safety in bilious and inflammatory disorders.)

77. Saccharum officinale.—*Sugar Cane.*

This is a native of Africa, the East Indies, and of Brazil; from whence it was introduced into our West India islands soon after they were settled.

The sugar cane is the glory and the pride of those islands. It amply rewards the industrious planter, enriches the British merchant, gives bread to thousands of manufacturers and seamen, and brings an immense revenue to the crown.

It is not meant here to say any thing of the process for making sugar. This has been done by several hands, and particularly by Colonel Martin, of Antigua, and by Dr Grainger, late of St Christopher's, in his elegant poem of the Sugar Cane.

(It is sufficient here to observe, that in twelve months from the time of planting, the yellow ripe canes are sent to the mill. The juice squeezed out runs in gutterings to the boiling house, mixed with a due quantity of the ley of white lime and ashes. Boiled, skimmed, and shifted from one copper to another, till at last, being of a thick consistence, it is

cast into broad flat troughs to cool. The sugar next day is put into conical pots to drain, and afterwards into hogsheads for the European market.

The skimmings from the coppers and drainings from the pots and hogsheads run in gutterings to the still-house, where, after being fermented in cisterns, they are distilled into rum.

Nor is any part of this plant useless. The tops are fine food for cattle, or, when dry, an excellent thatch for houses. Even the refuse from the mill is dried, and makes good fuel for boiling sugar. The ashes taste very strong, and with little trouble might produce a great deal of fixed salt.)

Sugar, formerly a luxury, is now become one of the necessaries of life. In crop time every Negro on the plantations, and every animal, even the dogs, grow fat. This sufficiently points out the nourishing and healthy qualities of sugar. It has been alleged that the eating of sugar spoils the colour of, and corrupts, the teeth: this, however, proves to be a mistake, for no people on the earth have finer teeth than the Negroes in Jamaica.

Dr Alston, formerly professor of botany and materia medica at Edinburgh, endeavoured to obviate this vulgar opinion: he had a fine set of teeth, which he ascribed solely to his eating great quantities of sugar.

In medicine I need say little of the use of sugar. Externally it is often useful: mixed with the pulp of roasted oranges *, and applied to putrid or ill-disposed ulcers, it proves a powerful corrector.

(The culm or stalk is of the gramineous kind, and from fifteen to sixteen feet high; the joints are two or three inches apart, and the trunk is thicker than a walking stick.

* Vide Citrus.

The leaves are long, feel rough, and are of a fine green colour. Sometimes a tall, spiry, and grass-like panicle of flowers appears, known by the name of arrows. The seeds never come to perfection. The plant is propagated by laying a few joints of the cane in the earth.)

78. Sesamum indicum.—*Vanglo.*

The oil seed, or vanglo plant, was first introduced into Jamaica by the Jews as an article of food. It is cultivated in gardens and provision grounds.

The plant is annual and herbaceous, rising to about three feet. The flowers are numerous, white, and belong to the class *Didynamia* of Linnæus. The pods are about the thickness of one's little finger, and contain a great number of small white seeds.

In diet the Negroes boil this in soups and broths, instead of flesh meat. The Jews, besides this, make cakes of it to eat as bread. The expressed oil is as clear and sweet as oil of almonds, and keeps better. The Behen's oil, so useful for the finest varnish in coach painting, is probably no other than that of the vanglo. The proportion of oil in this seed is great, nine pounds yielding two pounds of oil.

79. Smilax Sarsaparilla.—*Sarsaparilla Root.*

Several species of smilax have roots nearly similar : but that from Honduras and Campechy is the best.

This species has stems of the thickness of a man's finger : they are jointed, triangular, and beset with crooked spines. The leaves are alternate ; smooth and shining on the upper side ; on the other side are three nerves or costæ, with sundry small crooked spines. The flower is yellow, mixed with red. The fruit is a black berry, containing several brown seeds.

Sarsaparilla delights in low, moist grounds, and near the banks of rivers. The roots run superficially under the sur-

face of the ground. The gatherers have only to loosen the soil a little, and to draw out the long fibres with a wooden hook. In this manner they proceed till the whole root is got out. It is then cleared of the mud, dried, and made into bundles. The sensible qualities of sarsaparilla are mucilaginous and farinaceous, with a slight degree of acrimony. The latter, however, is so slight as not to be perceived by many; and I am apt to believe that its medicinal powers may fairly be ascribed to its demulcent and farinaceous qualities.

Since the publication of Sir William Fordyce's paper on sarsaparilla in the Medical Observations and Inquiries, vol. i. sarsaparilla has been in more general use than formerly.

The planters in Jamaica supply their estates with great quantities of it; and its exhibition has been attended with very happy consequences in the yaws and in venereal affections, as nodes, tophi, and exostosis, pains of the bones, and carious or cancerous ulcers.

Sir William Fordyce seems to think sarsaparilla a specific in all stages of lues; but from an attentive and careful observation of its effects in some thousands of cases, I must declare I could place no dependence on sarsaparilla alone. But if mercury had formerly been tried, or was used along with sarsaparilla, a speedy cure was soon effected. Where the patients had been reduced by pain, disorder, and mercury, I prescribed a decoction of sarsaparilla, and a table spoonful of the powder of the same, twice a day, with the greatest success in the most deplorable cases of lues, ill cured yaws, and carious or ill disposed sores, or cancers.

There are only a few sarsaparilla plants in Jamaica; but it might be cultivated there, and save the planter an immense expence.

We have also the China root growing wild in Jamaica; but it is seldom used in practice.

80. SPIGELIA ANTHELMINTHICA.—*Worm-Grass.*

Worm-grass grows wild in some parts of Jamaica, but is commonly planted in gardens. It grows sometimes to two feet in height. Dr BROWNE gives a very just figure of this plant.

The flowers are small and white; the capsules are round, and contain a great quantity of small seeds.

Worm-grass has long been in repute as a vermifuge, and is in daily use as such in Jamaica. Its action is similar to that of the Spigelia marilandica. Most vegetable anthelminthics have less or more of a narcotic effect; and this genus, in a full dose, brightens the coats of the eyes, and distends their vessels: it also occasions sleep, and hence is useful in worm fever. After its use for some days, a dose of castor oil is generally ordered. Let me here again be permitted to repeat the uncertainty of the signs of worms, especially in fever, and to caution the public against depending on anthelminthics alone in their cure. The Jesuit's bark should be given in all doubtful cases, or where worm medicines fail in their effects.

81. SWIETENIA MAHAGONI.—*The Mahogany Tree of Jamaica.*

This tree grows to a most majestic size and height. It is of slow growth, and great hardness. The wood is well known in Britain.

Mahogany was formerly very plentiful in Jamaica, but is now only in the high hills, and difficult of access.

The trunk is generally straight; the bark rough, scaly, and brown; that on the boughs and twigs is grey and smoother. The bark of the boughs and twigs, when dried, is very like the Peruvian bark in colour, as well as in taste, but has more bitterness, and none of its virtues.

Mahogany bark, infused in wine or spirits, makes an elegant tincture, which resembles the tincture of the best Jesuit's

bark, for which it is often substituted ; and I have seen the powder administered in intermittents with success, when the Peruvian bark could not be had.

(Towards the top it sends off long spreading branches, having light coloured and sometimes red or withered like leaves. The blossoms are numerous, small and yellow. The fruit is an oval pod, about the size of a goose's egg ; when ripe the hard pericarpium splits open on the tree, and the seeds fall to the ground.

The quality of the wood varies according to the soil and situation. That which grows on mountainous or rocky places is generally of a closer texture than what is found on low savannahs and swamps. This may account for the Spanish mahogany being of coarser grain, and therefore of less value, than the Jamaica wood. The people who go from Jamaica to Cuba cut their mahogany near the sea, and bring it away by stealth. No doubt the hilly inland places produce as good timber as ours.)

82. Tamarindus Indica.—*The Tamarind Tree.*

This beautiful, shady, and useful tree, is cultivated all over the West Indies. It rises to thirty or forty feet high. The trunk is brown, scaly, and of a good size. The wood is brown, very hard, and takes a fine polish.

The branches are spreading: the leaves small, numerous, and pinnated. The flowers yellow, and beautifully streaked with crimson ; they continue during the whole of June and July, and then drop off.

The fruit is a broad, ash-coloured pod. The external covering is thin and brittle. This being removed, we find several hard seeds, like beans, enveloped in a soft brown pulp, which is secured by sundry longitudinal woody fibres. This fruit is ripe about Easter, when it is picked off the trees, and put up for use.

Tamarinds are prepared or cured two ways. The common way is to throw hot sugar from the boilers on the ripe pulp: but a better method is to put alternate layers of tamarinds and powdered sugar in a stone jar. By this means the tamarinds preserve their colour, and taste more agreeably. The seeds, too, of tamarinds, thus prepared, will vegetate easily; and this method conveys a hint for sending succulent berries and seeds in tamarinds from abroad.

Preserved tamarinds are kept in most houses in Jamaica, either as a sweetmeat, or for occasional use as a medicine. They are cooling, laxative, and antiseptic; hence useful in acute and putrid diseases.

Dr ZIMMERMAN prescribes tamarinds in putrid dysentery. I commonly add a portion of Epsom salts, till stools are procured; afterwards, tamarinds alone till the disorder is cured.

In obstinate dysenteries I have found five grains of calomel act like a charm, whether the disorder was kept up by bilious obstructions or worms.

(The Tamarind tree does not seem to be a native of the West Indies, since it is only found where settlements have been made. It continues to thrive above an hundred years.)

83. THEOBROMA CACAO.—*Chocolate Tree.*

In all the French and Spanish islands and settlements, in the warmer parts of America, the chocolate tree is carefully cultivated. This was formerly the case also in Jamaica; but at present we have only a few straggling trees left as monuments of our indolence and bad policy. This tree delights in shady places and deep valleys. It is seldom above twenty feet high. The leaves are oblong, large, and pointed. The flowers spring from the trunk and large branches: they are small and pale red. The pods are oval and pointed. The seeds or nuts are numerous, and curiously stowed in a white pithy substance.

The cocoa nuts being gently parched in an iron pot over a fire, the external covering separates easily. The kernel is levigated on a smooth stone ; a little arnotto is added, and, with a few drops of water, is reduced to a mass, and formed into rolls of one pound each. This simple preparation is the most natural, and the best. It is in daily use in most families in Jamaica, and seems well adapted for rearing of children.

84. Verbena Jamaicensis.—*Vervain.*

This is a common weed about all cultivated places. The leaves are serrated and pretty broad ; the flowers blue.

A tea or a strong decoction of vervain is in frequent use as a cooling laxative ; and a tea-cupful of the expressed juice of bruised vervain leaves is a smart purge.

85. Zanthoxylum clava Herculis.
——————— trifol[illegible]um.

The first of these is the prickly yellow wood, and is a lofty and good timber tree. The second is called the tooth-ache tree. It is frequent in gravelly places near the sea.

The berries of both are somewhat peppery, and a bit of the bark from the roots is a powerful sialogogue, and gives that sort of sensation as if the mouth was full of blood ; hence it is so serviceable in tooth-ache.

(The leaves of the toothache tree are of a lively green. The flowers grow in clusters ; the berries are small, and the kernel is very hard.

From an incision in the tree flows a clear amber-coloured gum, which does not dissolve in water or spirits.

The trunk is grey, and beset with prickles two inches long, and at the base one inch in diameter. The prickles are easily broken off.)

86. Zea Maiz.---*Indian Corn or Maise.*

Indian corn, or maise, is cultivated in America as an article of food; as it is also in Jamaica. The maise of North America is white, flat, spongy, and of the size of a dried Turkey bean. The maise of Jamaica is much smaller, reddish, and compact. The grains are fastened to a light spongy substance, called the husk, or corn stick, in longitudinal rows, about twelve in number, round, and containing thirty grains in each. For the most part, there are two or three such heads on every stalk. The increase is prodigious.

Guinea corn, or Indian millet, is also cultivated to a great extent in Jamaica. These corns do not constitute a great part of the support of the inhabitants of Jamaica; but are chiefly used to rear poultry, to feed horses, and to fatten pigs, goats, or sheep.

(The stalks grow from four to ten feet high; are jointed like wheat, at each of which joints grows a long flag leaf. On the top is a cluster of blossoms like rye, the farina of which falling, impregnates the pistilla towards the middle and foot of the stalk.

The stigmata shoot out in a bearded form, are red, four inches long, and are so many tubes to convey the farina or pollen to the germen.

In five months after sowing this corn, the ears will be dry enough to be gathered in. They are a span long, of a conical shape, and have from eight to ten rows of yellow grains, each of which rows contains from fifteen to thirty. I have seen four such ears on one stalk.

Indian corn ought to be planted four feet asunder, carefully weeded and moulded round the roots. When the farina ripens, the tops and blades may be cut off as food for horses and cattle.

The maise in Jamaica is smaller than that brought from North America, but it is a great deal better, and sells for double the price.

Indian corn ground into meal makes a coarse bread, and, if boiled in milk, makes a gruel called *hominé*. The Negroes boil this corn, and eat it with salt fish or salt. In this way it proves a very wholesome food; but, if roasted and eaten in any considerable quantity, it occasions constipations of the bowels, and pains in the stomach.

The chief use of this corn is in feeding horses, hogs, and poultry.)

PALMÆ.

Of this natural order we have several in Jamaica; some of which are indigenous, others have been introduced.

87. Cocos Nucifera.---*Cocoa Nut.*
——— guineensis.---*Prickly Pole.*

The cocoa-nut tree was originally brought from the Spanish main to Jamaica, and is now planted about settlements as an useful and ornamental tree. It bears fruit about ten or twelve years after it is planted. The fruit is large, triangular, about twelve inches long, and nine inches in diameter. After removing the external covering, and a fibrous substance, we find a large, round, hard nut, in which is contained about eight ounces of sweetish water, surrounded by a white and firm kernel.

The rib of the leaves or pinnæ is smooth and flexible, and is used in the heart of bougies. The leaves and their stems are useful for thatching houses, or making baskets. The curious reticular cloth, which covers the tender foot-stalks, serves for strainers. A liquor drawn from the trunk, fermented with rice, makes arrack. The fibrous substance covering the nut, spun and twisted, makes strong and durable ropes.

The shell is converted into drinking cups, sugar dishes, &c. The water is pleasant, and used to quench thirst. Before the fruit is quite ripe, the nut is soft, and may be eaten with a spoon; but when ripe it is hard. Like other nuts, it is apt to give a pain in the stomach. A sort of tarts, or cheesecakes, is made from the dry nut-kernels, rasped or pared down. This may also be used for emulsions, instead of almonds; and, by expression or decoction, these kernels yield a considerable quantity of oil.

The prickly pole is a native of low and upland valleys; it rises to about thirty feet. The trunk and leaves are beset with spines, in form of needles. The fruit is of the size of hiccory nuts, and very hard. The black people boil the nuts in their messes; and, if boiled in water, a yellow thick oil, or butter, is obtained.

88. Cocos Butyracea.—*The Mackaw Tree.*

This was originally brought from Guinea by the Negroes. The trunk is straight, and guarded by numerous long spines, or needles. The fruit is triangular, yellow, and as big as a plum. The nut, or kernel, by decoction yields the oleum palmæ of the shops.

The fruit of this and the former serve to feed swine, and are greedily eaten by the wild hog, of which there are still many in the interior parts of the island.

89. Areca Oleracea. *Cabbage-Tree.*

This is a native of the woods. The trunk is straight, and marked with rings at the vestigiæ of the footstalks of the leaves. These leaves spread out at the summit in form of an umbrella, and are about three yards in length, and pinnated. The footstalks at the bottom are broad, and form a green trunk above the woody or true summit. As the lower leaves drop, the broad part of the footstalks forms a hollow trough.

or cradle for Negro children ; and, when cut up, makes excellent splints for fractures. On the inner side of every tender footstalk are tender pellicles, which, when dried, make a writing paper. The heart is made into pickles, or, when boiled, is served up at table. The trunks serve as gutterings ; the pith makes a sort of sago ; and the nuts yield oil by decoction.

Of all trees in the universe, this is the most beautiful, and perhaps the tallest. I have seen one an hundred and seventy feet high, and have heard of others still taller.

(We have many kinds of palm trees in Jamaica, but none so beautiful as the cabbage-tree. It often grows 120 feet high ; the trunk smooth, and surprisingly straight. The wood of the cabbage-tree is very hard, but so thin that it is only fit for walking sticks, or gun ram-rods. In the middle is a woody fibrous pith, which resembles sago.

At the top of the trunk it puts forth long green spathæ, which open when full grown. They contain finely branched panicles, with innumerable blue flowers, which have eight stamina. The berry is oblong, containing a hard woody kernel.

The leaves are long, spreading, pinnated, and very strong Their petioles unite with a green trunk, about six feet in length, from whence the blossoms spring ; so that this part is foliaceous. When the leaves are old they strip off, and the part that envelopes this green trunk appears woody like deal. When the leaves are stripped off green, we strip off the inside skin of each, which, when dry, looks like vellum ; this bears ink very well on one side, on the other it seems greasy. From one trunk we can procure twenty large sheets. This seems to be one of the papyri of the ancients.

In the middle of the green trunk is a tender white heart, which, when boiled, is eaten like cabbage or turnips.)

90. *The Sago Palm.*

This valuable palm-tree was presented to the island by

Admiral RODNEY, with many other valuable plants, captured in a French ship by Captain MARSHALL.

This plant was but young when I saw it; but, as it was healthy, and carefully attended to in Mr East's garden, it is hoped it will thrive, and in time be propagated by the seeds.

In Amboyna, and several other parts of the East Indies, sago is made from this tree.

The pith is beaten into a stiff paste; then granulated through a sieve, in the same manner as the grains of gunpowder are formed.

The sago powder sold in the shops is merely the starch of potatoes; and the tapioca of the Brazils is the starch of cassada.

See the articles Jatropha and Maranta.

91. PHOENIX DACTYLIFERA.—*Date Tree.*

This tree is not indigenous, but was introduced soon after the conquest of the island by the Spaniards. There are, however, but few of them in Jamaica at this time. The fruit is served up as a desert; and the kernels yield an oil, or butter, similar to the palm oil from Guinea.

There are several other palms growing wild in Jamaica, viz. the mountain thatch, the palmeto thatch, the palmeto royal, &c. The fruit is either a drupa, or a berry, and all of them have one or more nuts, which contain a kernel that yields oil. This circumstance, with the great resemblance in their habit, makes them truly a natural class, or family.

EXTRACTS

FROM

Dr WRIGHT'S HERBARIA.

[The following Extracts are taken from the herbaries prepared by Dr Wright, during his residence in Jamaica. The whole work extends to five volumes quarto, and from a notice in Dr Wright's handwriting, dated Edinburgh, 1st June 1813, it appears to have been carefully revised by him after his return to Great Britain. Such articles have been extracted only as could be made intelligible without the aid of engravings, or of the dried plants themselves, which have all been laid down by Dr Wright, with the greatest care.]

MONANDRIA MONOGYNIA.

1. Boerhaavia erecta, et diffusa.—*Hog-weed of the Americans.*

This plant is met with in newly cultivated grounds, and is from one to two feet high. The leaves are few, and of a dull green cast. The flowers are small, numerous, and of a purple colour.

A decoction of the leaves and stalks is used in diuretic ptisans and glysters. The whole plant is given for food to hogs.

DIANDRIA MONOGYNIA.

2. Salvia occidentalis, Sw.—*American Field Basil.*

This basil grows wild in our savannahs, and has numerous small pale red flowers. The plant smells agreeably. The juice is often used in ophthalmias, but the plant is more frequently used in fomentations.

DIANDRIA TRIGYNIA.

3. Piper nitidum, Sw.—*Lesser Long Pepper.*

The leaves are of a dark green colour, and very smooth and shining, the fruit is smaller, but rather more aromatic than that of the great long pepper.

The virtues of this are similar to those of the oriental long pepper. It is frequently used by the Negroes in Jamaica, to season their soups. The leaves, beaten and mixed with rum, become an excellent detergent in ulcers.

4. Piper aduncum, L.—*Crooked Long Pepper.*

This species of pepper is taller and thicker in the trunk than any of the others. The bark and fruit not near so hot, and the leaves small and furrowed.

TRIANDRIA DIGYNIA.

5. Holcus bicolor, L.—*Guinea Wheat.*

This beautiful gramineous plant is cultivated for the same purposes as the Guinea corn; but does not grow so tall. The Guinea grass has its blossoms and seeds erect; here they are pendulous.

The grains in some are smooth, ponderous and brown; in others white.

6. Panicum amiliaceum, L.—*Wild Wheat.*

This grass is found in woods and thickets. Its seeds are black, shining, and ponderous. Horses and cattle eat it greedily, and it would seem that the seeds might be useful in raising poultry.

7. Pharus latifolius, L.—*Wild Oats.*

A plant, known by the name of Wild Oats, grows plentifully in the woodlands of Jamaica. The leaves are broad, ribbed, and of a shining green. The blossoms are small and green. The seeds are long, small and bearded, and stick to a person's clothes, when walking in the woods.

8. Panicum polygamum, Sw.—*Guinea Grass.*

Guinea grass was introduced into Jamaica, by mere accident, about forty years ago. A gentleman got some birds from the captain of a Guinea ship, and with them some seeds for their support. The birds soon afterwards dying, the seeds were cast out. In a short time a fine luxuriant grass sprung up, which was greedily eaten, by horses and cattle. Since that time it has been cultivated for cattle and horses food, and is in general use.

A small root, superficially planted, produces a large stalk or tuft of grass, which in two months runs into seeds. They ought to be planted four feet asunder, and carefully kept clean from weeds or slips.

When the seeds are ripe, cattle and horses are suffered to eat it down. The stalks are then cut close to the earth, or entirely dug out, and when dry burned off. In a short time the seeds spring up into a thick sward of grass, so that in future little care is necessary; the weeds have little room to grow.

We have pastures of two and three hundred acres extent in this fine grass: these are divided into ten or twelve acre pastures, and, when one is eaten down, the stock are shifted into the other.

9. Cynosurus indicus, L.—*Dutch Grass.*

This is a low grass, seen only in the summer months. The stalks are numerous from one root, and the leaves of a very dark green colour. It is thought to be a more hearty food for stock than Guinea grass; when made into hay, it smells very fine, and is used in the keeping of race horses.

10. Schoenus secans, N.—*Cutting Grass.*

Cutting grass is frequent in woods and thickets; the stalks are triangular, and serrated like a file, which will cut not only the hands and legs of the unwary traveller, but even his clothes, as if done with a knife.

The seeds are round, shining, ponderous and farinaceous, and are like those of millet grass.

TRIANDRIA TRIGYNIA.

11. Holcus saccharatus, L.—*African Millet.—Guinea Corn.*

This is cultivated as food for man and beast. It may be sown at any time of the year, and repeatedly cut down, till August, when it is suffered to grow up, and is ripe by Christmas.

The stalks are as thick as a walking cane, the leaves of the gramineous kind, and the whole plant is sometimes twenty feet high. The blossoms are numerous, small, and grow on a spike. There are several bunches on one stalk; the seeds

are round, larger than corianders, farinaceous, and heavy; and their increase may be as five thousand to one seed.

Guinea corn is cooked into several dishes by the poorer white people, but particularly by the Negroes, who are remarkably fond of it. It is also very useful in raising of poultry.

The leaves are excellent fodder for horses and cattle.

TETRANDRIA MONOGYNIA.

12. Rivina humilis, L.—*Guinea Weed.*

The Solanum lignosum, or Dulcamara, grows too plentifully in shady places, has white small tetrapetalous flowers, and shining red berries, smaller than currants. The stalks are brown and woody, the leaves of a lively green colour.

Many fatal accidents have happened to new and ignorant Negroes, who, mistaking this plant for guma, have, on eating it, suddenly died, or fallen into disorders, with a train of dreadful symptoms, which, after some weeks or months, put an end to their misery by death.

13. Cissus sicyoides, L.—*Snake Leaf.*

This troublesome climber grows in all fences, and runs on fruit trees, and, when suffered once to get a footing, is hard to be rooted out. The stem is often an inch or more in diameter, of a green colour, slender, and jointed. The leaves are numerous, and of a dark green hue. The florets yellow and tetrapetalous. They contain much honey, and are generally crowded with bees. The berries are of the size of currants, black, smooth, and shining. The juice of the berry is sweet, and of a fine purple, but no duration.

The leaves, coiled over the fire, are applied to evil disposed ulcers, and in the beginning of the yaws.

This wythe, dried and beaten, is very fibrous, somewhat like horse-hair, and is probably the Old Man's Beard of the common people.

The Banana bird builds its nest of some fibrous substance like this, and hangs it curiously like a sailor's hammock, by the ends.

14. Cissus trifoliata.—*Snake-leaf Withered Flowers.*

This beautiful climbing plant runs in fences, and has numerous small florets of a crimson colour.

15. Spermacoce verticillata, L.—*Wild Scabious.*

This is common in moist places, and is used in fomentations by the Negroes for the cure of the itch.

16. Spermacoce tenuior, L.—*Small-leaved Scabious.*

In cane-piece intervals, we find this, which, like others of the same genus, is made use of as the above.

17. Spermacoe hirta, L.—*Common Scabious.*

In open pastures and dry savannahs, this species of scabious grows spontaneously. The stem is woody, the plant is bushy, and the clusters of flowers pretty large. We only use it in the cure of the itch, by way of bath, as the preceding.

18. Spermacoce radicans, *Aubl.*

This is a branched kind, which grows in moist places, and the stems run a great way, sending off fibres at every joint. It is used with the same intention as the above mentioned.

PENTANDRIA MONOGYNIA.

19. Solanum torvum, Sw.—*Macaw Bush.*

This troublesome plant is of speedy growth, as, in twelve months, it is ten or twelve feet high, and chokes up every other plant. The trunk, branches and leaves, are beset with short, thick prickles; the flowers are numerous, white, and 5-lobed. The berries, when ripe, are of the size of a cherry, yellow, hard, and containing many flat seeds.

No use is made of this plant. It does not appear to be poisonous, as horses and cattle, when hungry, eat it with impunity.

20. Solanum tomentosum, L.—*Turkey Berries.*

The Turkey-berry bush grows low; the stems only are beset with short crooked prickles, the blossoms are small and white; the berries are red, soft, and less than a cherry, containing many seeds.

Cattle or horses cannot eat this plant, on account of the prickles, but turkeys and other fowls are very fond of the berries.

21. Solanum mammosum, L.—*Cock-roach Poison.*

This bush looks like the foregoing; the prickles on the stems and leaves are long and straight. The flowers are a bluish white. The fruit is of the size and shape of a pear, of a bright yellow colour, and contains many seeds.

This seems to be a species of the vegetable egg. No other use is made of it in Jamaica, than by boiling it up with sugar to poison cockroaches. Whether it has this effect is uncertain, as these filthy insects are so plentiful.

22. Datura stramonium, L.—*Thorn Apple.—Fire-Weed.*

The fire-weed grows on dunghills, and near dwelling-houses, to about two feet high: it is an annual plant, and I believe is cultivated in the gardens in Europe.

The stem is herbaceous, the leaves are broad, and of a dark green colour; the flowers are white, long, and funnel-shaped. The pods, large as those of a walnut tree, are beset with prickles, and contain many carved black seeds.

The leaves have a strong narcotic quality, and are applied to burns and scalds to benumb the parts. With the same view it is applied in headach, but, if too long kept on, will cause a temporary madness. If the seeds should lie on grass, and be eaten by stock, it will cause madness and death.

23. Cleome pentaphylla, W. W.—*Cayo-calaloo.*

Cayo is an African name for a plant, growing in newly cultivated grounds and gardens. The stem is herbaceous, the leaves of a dark green colour; the petals of the flowers white, the anthers and style red. These are succeeded by long pods, which contain many seeds.

When boiled it is used as greens, and deemed equal to spinach.

24. Solanum nigrum, L.—*Guma.*

This is another Guinea name, for a plant found in cane-piece intervals and gardens. Like the preceding, the stems are herbaceous. It has dark green leaves, small, white pentapetalous blossoms, and black shining berries of the size of a currant.

Our slaves gather and boil it with their soups, broths, and pepper pots.

25. Solanum verbascifolium, L.—*Bermudas Balsam.—Wild Tobacco.*

Bermudas balsam is of speedy growth, and triennial; the stem is woody, grey coloured, and has a large pith in the middle; the leaves are large, soft, and of the colour of sage. The flowers are numerous, white and pentapetalous. The fruit is a berry of the size and shape of a cherry, is yellow, and contains several seeds.

The leaves are used in fomentations, or beaten into a poultice, to deterge foul ulcers. In this country unctuous applications do not seem to succeed, and the vegetable dressings are with propriety substituted in their room.

26. Cordia Gerascanthus, L.—*Spanish Elm.*

This is a tree of a middle size; the bark is grey and furrowed. The timber is white, hard, and useful in building.

In April, the whole tree is clothed with white, beautiful pentapetalous flowers, which in a few days wither, but do not drop, till the fruit is ripe, when both fall off at the same time.

27. Plumeria rubra, L.—*Milk Shrub.*

This is called here Spanish Jessamine, and is cultivated in gardens on account of its flowers. The tree grows as tall as a cherry tree, and sends off several branches, which terminate abruptly.

It has no leaves from January till May, when they are put forth, and are of a shining green colour. The leaves and blossoms grow from the summits of the thick branches. These flowers are red and white, and of a luscious sweet smell.

It seldom bears fruit, which is a thick round pod, containing many seeds.

Near the sea is found another species of this tree; it grows very tall, and generally bears plenty of pods.

It is said that a very small quantity of the inner bark of the roots of this plant is a most virulent poison. On wounding the tree, a great quantity of milky juice runs out, which tastes very acrid, and is probably one of the poisons used by the Indians on their arrows.

28. Cœnocarpus erecta, L.—*Button-Tree.*

In sandy places near the sea, we find the button-tree, growing to a middle size. The bark is rough, and furrowed. The branches are long and spreading, and well shaded with deep green leaves. The blossoms are button-like and white, the berries, oval and of unequal surface. The tree makes a good building timber.

29. Chrysophyllum cainito.—*Star Apple.*

The star apple-tree is of the middle size, and sends forth many spreading branches. The leaves on the upper side are green, on the under side of a reddish brown colour, and glisten like silk.

The blossoms are numerous, small and yellow; they appear in July, and the fruit is ripe in March following.

Star apples are larger than European apples; some are green, others red; when ripe, they are soft, but do not drop off the tree like other fruit, for they dry up and wither.

This is reckoned amongst our best fruits. Its jelly is rich, and tastes very pleasant. The seeds are flat, black, smooth, and shining.

The bark of the tree is furrowed longitudinally, and cracked across like the Peruvian bark; but has not its taste

or virtues. On tapping the tree, a thick milky astringent liquor runs out.

30. VITIS CARIBBÆA, Dec.—*The Water-Wythe or Wild Grape.*

The trunk of this vine is of a whitish colour, and often as thick as a man's thigh; it runs up to the top of the tallest trees, and sends off but few branches. The leaves are broad, of a light green on the upper side, but white underneath. The blossoms are like those of the common grape. The berries are larger, and contain an austere rough juice. How far culture would improve them, can only be determined by experience; but it is certain that the wild grapes that run on fences, and, consequently, have the fruit exposed more to the sun, are much sweeter than those that are shaded. It is therefore probable, that, if this were planted and supported as the common grape, and the leaves pulled off, as soon as the berries are half grown, so that the rays of the sun might have their full force, this native grape might be greatly improved in size and flavour. By proper management and with little expence, a generous rough wine might be made from it, for the consumption of the colony, and it might even be added to our articles of exportation.

From the vast variety of climbing plants here, nature seems to have intended this country as a nursery for the vine; what we planted came to great perfection. But we are so engaged with other known staple commodities, that we can think of no new improvement in any thing else.

About three feet of the thick fresh trunk will yield a pint of wholesome water in the driest seasons. It is thus well known to our thirsty hog hunters, or parties in quest of rebellious Negroes.

31. Cestrum vespertinum, L.—*Blue Poison Berry.*

This shrub grows wild in the woodlands, to fifteen or twenty feet high. The blossoms are smaller than the common coffee, and the berries are small and black.

The juice of the berry is a fine blue, and if it could be fixed, would be useful as a dye.

32. Erythroxylon areolatum, L.—*Iron-Wood.*

This tall and stately tree is very frequent in our woods. The trunk is straight; the bark grey and furrowed, longitudinally and across. The wood is hard, red coloured, and ponderous, and is justly esteemed as one of the most useful timbers for building, but, exposed to the weather, it soon decays.

The flowers are small and white; the berries black and numerous, containing several seeds.

33. Achyranthes altissima, Sw.—*Basket Withe.*
Chamissoa altissima, Humb. and Bonp. Nov. Gen. et Sp.

This is found in woods and thickets, running up trees. The trunk, seldom more than two inches in diameter, is of a whitish-brown colour. The leaves are of a lively green; the blossoms are small, numerous, and green; and the seeds are white.

The trunk is sometimes split for hoops and baskets. The young tops are boiled for greens.

34. Plumeria alba, L.—*Spanish Jessamine Tree.*

This tree is cultivated in gardens, on account of the number of its white, sweet, but luscious scented flowers. The branches are thick, but terminate very abruptly; the leaves

are broad, fleshy, and of a lively green colour, falling off in January, and again putting forth in June.

It is rarely that these trees have fruit. The pods are as thick as a man's thumb, round, smooth, and four inches in length, and containing four or five seeds.

On wounding the grey trunk, a thick milky juice runs out, of an acrid taste, and caustic effect.

The inner bark of the roots is said to be in use as a poison among the Africans.

A tall tree of this kind grows by the sea side, bearing abundance of white flowers, and many pods.

35. Convolvulus pentaphyllus, *L.*—*Cowitch Vine.*

This small climber runs among bushes, has many dark green narrow leaves, white flowers, round capsule, with sundry seeds.

The stem of this vine is thickly set with down, which stings like the nettle.

36. Echites umbellata, *L.*—*White Ipecacuanha.*

This is a climber, and sends forth many beautiful white, contorted blossoms, which are soon followed by pods, jointed in the middle, which, besides a silken down, contain many seeds.

Some gentlemen acquaint me that the roots, when dried, are by some used for ipecacuanha, but with such an effect that the most thinking part of them will never try it again, for it brought on stupor, delirium, and a train of alarming symptoms.

37. Cynanchum hirtum, *L.—Large Yellow Swallow Wort,* or *Nightshade.*

This plant is met with in shady places, climbing on the neighbouring bushes. The stem is woody; the leaves are opposite, shining, and of a lively green. The blossoms are yellow and funnel shaped, and the pods contain many seeds imbedded in a silky down.

This is universally said to be a very destructive poison, and to be used as such by the merciless slaves here. Happily for us we have a powerful antidote in the bastard sensitive plant.

38. Echites suberecta, *L.—Lesser Yellow Swallow Wort,* or *Nightshade.*

The lesser yellow swallow wort, or nightshade, has woody stalks, and small yellow contorted flowers. It twists round bushes and trees, principally the logwood. The leaves are small and opposite; on plucking them off or breaking them, a milky juice oozes out. The pod is small and long, containing a few seeds, with a small quantity of a silken down.

39. Echites torulosa, L.—*Small Yellow Nightshade,* or *Swallow Wort.*

This delights in waste lands, or waste places, and climbs on the adjacent bushes; it flowers in May, and its long pods are ripe in August. Like others of its genus, it is looked on as deleterious, and it is carefully avoided by every animal.

40. Solanum pseudo-capsicum, L.—*Blue Nightshade, with White Flowers.*

This poisonous plant grows in copses, by road-sides and

through woods. It will mount up on tall trees; and in March looks very pretty, having numerous white flowers with yellow antheræ. The berries are like red cherries, and contain many seeds in a soft sweet pulp.

This plant is deemed destructive, and supposed to be amongst the most powerful of the Negro poisons. The bastard sensitive plant (*Cassia Chamæcrista*, L.) is a noble antidote against this as well as many others.

41. Solanum Lycopersicum, L.—*Love-Apple,* or *Tomato.*

This is cultivated in gardens and provision grounds, for culinary purposes. The plant is slender, and rises to no height, unless supported by other plants. The blossoms are yellow, and five-cleft. The fruit is as large as a plum, round, soft, smooth, and shining. It contains a gelatinous soft, pulp, and many small flattened seeds.

Tomatoes are boiled in soups and broths, to which they impart a rich agreeable taste and flavour.

42. Physalis pruinosa, L.—*Pop-Berry.*

This low plant grows about settlements, and in rich soils, to about two feet high. The stem is herbaceous; the leaves of a light green colour; the blossoms yellow; and the berries the size of a small cherry, are inclosed in an inflated calyx.

Children eat this berry with impunity, though there is another species less common, that is poisonous.

43. Chrysophyllum oliviforme, L.—*Wild Silver Star-apple.*

This tree is frequent in woods. It is of the size of the Chrysophyllum cainito, No. 29. The leaves are broader, and of a darker green colour on the upper side. The under side

of the leaves is silvery and shining. The blossoms are similar to the Cainito, and of the same size.

The fruit is an oblong berry, less than a plum, black, smooth, and shining, containing one stone, in which is a pretty large kernel.

The fruit is sweet and agreeable.

PENTANDRIA TRIGYNIA.

44. Turnera ulmifolia, L.

The Turnera ulmifolia is frequent in waste lands, and pimento walks. It grows three feet high, has herbaceous stems, and light green leaves, which grow in pairs. The flowers are large, yellow, pentapetalous, and only open in the day-time. The pods contain sundry seeds.

Whether this be poisonous or not is unknown, but no insect eats the leaves; so that it is a very suspicious plant, and it is deemed by the natives to be of the fatal tribe.

PENTANDRIA PENTAGYNIA.

45. Tournefortia hirsutissima, L.—*Chigre Bush.*

This perennial plant grows in thickets, and twists round the trunks and branches of trees. The flowers grow erect, and are small, white, and numerous. The berries are white, sweet, and as big as currants. They are eaten by children; but I am unacquainted with their medicinal virtues.

46. Heliotropium gnaphaloides.—*Sea-side Lavender.*

This grows plentifully by the sea-side, to about five or six feet high. It is thick and bushy; has yellow flowers, followed by pods, which contain many round seeds.

It has a very sweet smell, which, however, does not rise in distillation. Its medicinal powers are not known here.

It is a shrub.

HEXANDRIA MONOGYNIA.

47. Tillandsiæ species.—*Wild Pine.*

We have a great variety of plants under the denomination of Wild Pine. They adhere to the thick branches, or grow in crutches of the largest trees. In a collection of dried specimens, it is impossible to convey any just idea of them, on account of their bulk, and the beauty of their flowers; we must be contented with the smallest, *Tillandsia utriculata*, L.

This grows on trees; has short fleshy leaves, and beautiful white and red blossoms; these are followed by pods, which contain many seeds.

48. Petiveria alliacea, L.—*Guinea Hen-weed.*

Guinea hen-weed is found in plantain walks, and other shady places; it is commonly a foot high. The stalks are herbaceous; the leaves are of a lively green; and the numerous small flowers are white.

The seeds are very small, and are supposed to be sometimes swallowed by our common wasps here *. The seeds

* Wasps swarm in all parts of the West India Islands, particularly in the roofs of old houses, where no smoke is made, and often on fruit-trees, near settlements. Their nests are in general circular, and their cells, which are regular to mathematical exactness, are suspended by a small neck of hard bituminous matter.

These wasps are armed with a sting, and when any way disturbed will attack men or beasts. Their sting is immediately attended with violent pain, inflammation, and fever for twenty-four hours. Laudanum often

swelling, are supposed to kill the wasps, when a leaf springs from their bodies similar to that of the Guinea hen-weed. Others, with some plausibility, think that the seeds of the misletoe adhering to the wasp kill it, and afterwards vegetate, and occasion this odd phenomenon.

On bruising the petiveria, it smells disagreeably pungent, and volatile. It is probable that this weed is possessed of diuretic and stimulating powers, though at present we know nothing certain of its effects.

49. Bromelia Pinguin, L.—*Wild Pinguin.*

The pinguin is planted for fences, on account of the strong hooked prickles with which its leaves are furnished on the edges. In appearance it resembles the pine; it is propagated from the shoots, and there seems no other objection to a fence of this sort, than that it spreads too wide, and shelters rats.

About the middle of April, a beautiful stem rises from the middle to the height of a foot, from the sides of which spring many beautiful pale red blossoms, mixed with white. The larger humming-bird chiefly feeds on these.

The fruit is of the bigness of a plum, the skin is yellow, like a ripe lime, and the contents are an acid pulp, and many seeds, &c. The pulp, eaten with sugar, is an excellent vermifuge, but apt to excoriate the mouth, and even the rectum, if too many are made use of at a time. Mixed with water, it makes an agreeable and effectual gargle in fevers, where the mouth and tongue are furred.

gives relief, when rubbed on the part, and the application of indigo is said to be a powerful antidote.

50. Agave americana, L.—*American Aloe.*

The American aloe grows spontaneously by the sea in rocky places.

If the thick leaves are pressed in the mill, and the juice inspissated in balneo mariæ, till it acquires the consistence of plaster, it becomes a vegetable soap: for the discovery of this a person had one hundred pistoles from the Assembly. But if clothes are not speedily rinsed in fresh water, they will be rotted by the soap; and on this account it is laid aside.

If the leaves are well bruised, and the pulp washed and cleaned by water, a strong filamentous substance like silk-grass is obtained, which might be applied to several uses.

This plant is of so enormous a size, that no part of it could be laid down as a specimen.

HEPTANDRIA MONOGYNIA.

51. Pisonia aculeata, L.—*Fingrigo Bush.*

This shrub grows in thickets, and has many small trunks from the same root. In appearance and prickles it resembles the black thorn. The leaves are small and numerous; the blossoms white and globular. The fruit is a small bur, of an oval shape, which sticks to the mouths of cattle, and is disengaged with difficulty.

It would seem that it might be made into fences. If it has any medicinal virtues we are entirely ignorant of them.

OCTANDRIA MONOGYNIA.

52. Guarea trichilioides, L.—*Musk-Wood.*

This tree is frequently met with in most of our woodlands. It grows to a middle size; the outer bark is rough and grey;

the inner bark and wood are red, and smell something like musk. The wood is soft, splits easily, and is used for wattling houses.

This is a shady tree; the leaves are broad, and of a lively green, and the flowers are white. The berry is brown, hard, and large as a nutmeg. The seeds are red.

Decoctions of the bark are sometimes given in gravelly complaints.

53. Coccoloba uvifera, L.—*Sea-side Grape.*

This grape-tree is of the middle size, and grows by the sea-side. The trunk is grey; the leaves broad, round, and of a light green colour. The blossoms are white and pendulous. The fruit is a berry of a black or purple colour, tasting sweet and subacid, and having a stone in the middle, in which is contained a single seed.

The fruit is sometimes served up as a repast, and the bark is reckoned an excellent astringent in watery purgings and in dysenteries, after the inflammatory symptoms have been abated by bleeding, purges, and diluents.

54. Rivina octandra, L.—*Cooper-Withe.*

Cooper-withe grows in fences, and in lands suffered to grow up in weeds and bushes. The trunk and branches are woody, slender, and covered with a brown coloured bark. The leaves are of a light green colour. Many white fragrant blossoms grow in a spike, which are followed by numerous black, smooth, shining berries, of the size of currants, containing many small seeds. The berries are sweet, and have a rich purple juice.

About the time of flowering may be seen many remarkable excrescences, out of which grow leaves and blossoms.

55. Daphne Lagetto, W. W.—*Alligator Bark-Tree.*

This tree grows on rocky hills and places almost inaccessible, to a middle size. The trunk is grey, the leaves green and shining, the blossoms small and numerous.

The bark of this tree was long known to the rebellious Negroes, under Colonel Cudjoe, before their capitulation in 1739; it is still procured, and sold to the white people.

A straight piece of the trunk being cut to a proper length, is beaten with a smooth stick till round; the bark is then pulled off, the outer grey skin is separated as useless, and the rest is put into a pail of clean water, where it is soaked a few hours, and rinsed with fresh supplies of water.

Before it is quite dry, begin to separate the laminæ. They consist of about twenty or more; these, when dry, are like fine clear gauze.

Thus has dame Nature furnished a cloth ready woven and bleached; our ladies make it into caps, ruffles, and even entire dresses. If carefully managed, it will bear to be several times washed with soap and water.

I am of opinion that this bark might easily be made into paper, as it seems to become a homogeneous mass when macerated in water *.

56. Ximenia Americana, L.—*Indian Date Plum.*

Though this tree is seldom more than four feet, yet I have seen it ten or fifteen feet high. The trunk and branches are grey and prickly, the blossoms small and numerous, the fruit like a small plum, oval-shaped and black.

* Dr Wright was the first botanist who discovered this tree to be a species of Daphne. He brought home the flowers, capsules, and seeds; and it has been since received into the Linnean system.

OCTANDRIA TRIGYNIA.

57. Sapindus saponaria, L.—*Soap-Berry Tree.*

In low moist savannahs we commonly meet with the soap-berry tree. It grows to a considerable height. The trunk is straight and grey, the heart of the wood firm and useful in small buildings. The leaves are of a particular form; the flowers are very small and white, and the berries are larger than a cherry, and yellow, containing a soft pulp, which is useful in washing clothes. It has a smooth shining black round nut, in which is contained a sweet kernel.

58. Paullinia pinnata, L.—*Supple-Jack Withe.*

This delights in rocky woodlands, and runs upon trees. The external bark is grey, and a little red. The wood is white, and knotted, the fibres being variously contorted; it is very flexible, and is generally cut for walking-sticks or switches. The leaf is compounded very prettily; the blossoms are white, small, and numerous; the berries are red, and of the size of currants, having a scarlet pulp, and one black seed.

Supple-jacks are cut to the length wanted; being heated in hot ashes, the bark easily separates, and, if rubbed with lime-juice, become a little red.

DECANDRIA MONOGYNIA.

59. Parkinsonia aculeata. L.—*Jerusalem Thorn.*

The seeds of this beautiful tree are said to have been originally brought from Smyrna. It grows to a middle size,

has long small compounded leaves, of a lively green colour. The flowers are yellow. The pods are long and round, containing several oblong seeds. The tree is planted for fences, as it is prickly. It has no medicinal virtues.

60. Melastoma velutina, Willd.—*Velvet Leaf.*

This plant is about four feet high, and the leaves appear and feel like Manchester velvet. The blossoms grow in clusters, are white, pentapetalous, and have declined stamina. The fruit is a berry, black, hairy, and oblong; hence I suppose it to be the American gooseberry. The berry tastes sweet, and contains many small seeds.

61. Phytolacca icosandra, L.—*Mountain Caliloo. Pock-Weed.*

This plant is of speedy growth. The stem is herbaceous. The leaves are of a deep green colour. The flowers, growing in a spike, are white. The berries are red, and of the size of a currant; on being broken, they are found to contain many seeds, and a fine rich purple juice, which stains cloth or paper red; but the colour soon decays. Many attempts have been made to fix the dye, but in vain. The leaves of the very young plants, boiled, are excellent greens, and are used as such by the Negroes in their diet.

62. Iresine celosioides, L.—*Bitter Weed.*

This plant delights in shady places. The leaves are of a dull green colour, and the numerous florets are white. The seeds are very small, and, when ripe, are surrounded by a down which serves to waft them with the breeze.

The leaves are very bitter, and are used by some for the cure of that stage of gonorrhæa called Gonorrhæa virulentis, and sanguinolenta.

63. GUILANDINA BONDUC, L.—*Nicar Tree.*

This prickly bush grows chiefly by the sea-side. It is low, and has many spreading branches. The leaves are numerous, shining, and of a light green. The flowers are yellow. The pods are large, brown, and prickly, each containing a round hard nut, like the marbles used by children. The kernels of nicars are deemed by some astringent, by others diuretic.

64. VACCINIUM MERIDIONALE, *Sw.*—*Jamaica Bilberry.*

This is frequent in savannahs. The leaves are broad and shining; the blossoms red and white. The berries, of the bulk of a black currant, are first red, then black, and of an agreeable taste, and are sometimes served as a dessert.

65. CÆSALPINIA VESICARIA, L.—*Braziletto Wood.*

The Braziletto tree grows on rocky lands, rising to a middle size; the trunk is scaly and dark-brown, the leaves green and numerous; the spike of yellow blossoms is very pretty, and the brown pods contain several seeds.

The wood is hard, elastic, and fitted for several uses in plantation utensils. Its colour is a fine red, but very little of it is exported to Britain.

66. MELIA SEMPERVIRENS, Sw.—*Hoop-Tree,* or *Bead-Tree.*

It is believed that this tree was imported from America, as its wood was supposed to be well suited for making hoops; but it is either *too cheap,* or not found to answer the intention, as it is seldom or never made use of by the planters.

The leaves are of a lively green colour, the blossoms are a pale red; the stamina purple; and, as it is always in bloom, it is reckoned one of the prettiest shrubs we have. The berries are round, and contain hard seeds.

Some people here think this plant poisonous, but I cannot think so, as horses eat the berries without injury, and even fatten on them. This, by the bye, is a good mark to judge of plants or fruits, and I have made it a rule never to taste any leaf or fruit which is avoided by cattle or insects.

67. Melastoma prasina, Sw.—*Wild Currants.*

There are several varieties of this which differ but little. The leaves are of a dull green hue; the blossoms are white, and have declined stamina; the berries are less than currants, taste sweet, and contain sundry seeds.

This plant is frequent in moist savannahs, and is four or five feet in height.

68. Poinciana pulcherrima, L.—*Flower Fence,* or *Spanish Carnation.*

This shewy shrub grows wild in sandy places, and, on account of its great beauty, is planted in gardens. Its height is ten feet, or upwards.

The leaves have a disagreeable smell, and are said to be emenagogue, and cathartic. Some people make use of them as such, but they are not admitted in the practice of the physician.

69. Cassia emarginata, L.—*Antigua Senna.*

This woody plant is perennial, and grows eight or ten feet high. It puts us in mind of the blossoms of broom or furze.

The pods are about three inches long, and contain many seeds, surrounded with a sweet pulp.

A double quantity of the dried leaves, infused in boiling water, smells like the Alexandrian senna, and produces similar effects.

70. BANISTERIA LAURIFOLIA, L.—*Dragon Withe,* or *White Withe.*

This withe twists round the trunk and branches of trees, and is called the White Withe. Pretty switches or walking-sticks are made of it.

In May it has many yellow blossoms, very like the malpighia in structure and height.

71. CASSIA MIMOSIOIDES, L.—*Bastard Sensitive Plant.*

This small sensitive plant is found in cane-piece intervals; it is seldom above a foot high; the stalks are red and prickly; the leaves are small, the blossoms small and yellow, the pods flat, and the seeds small.

DECANDRIA TRIGYNIA.

72. MALPIGHIA PUNICIFOLIA, L.—*Barbadoes Cherry.*

This appears to be a native of the West India Islands. The trunk is black and thorny; sending off many branches, furnished with dark green leaves. The blossoms are small, numerous, and pale red. The berries, in size and colour, are like a cherry. They have a fine sweet and subacid taste, and contain three seeds.

The tree may be propagated from the seeds, but best from cuttings of the branches, which, in two years, will bear fruit.

73. Malpighia crassifolia, L.—*Locust-Tree.*

The locust-tree, so called, is a native of this island, and grows wild in the woods, to a considerable height; yet the trees will bear fruit when only four or five feet high.

The trunks are grey and knotty. The leaves are pretty broad, smooth, and shining. The blossoms grow in a cluster, are yellow, and very numerous.

The fruit is yellow, round, and as large as a cherry; when ripe, it is soft, and tastes very agreeably.

DECANDRIA PENTAGYNIA.

74. Spondias myrobalanus, L.—*Hog-Plum.*

This is a large tree, growing spontaneously. The trunk is grey and furrowed. At certain times of the year, if chopped, a clear insipid gum may be obtained, similar to gum-arabic.

The leaves are pretty broad, and of a light green. The blossoms are disposed in racemes, and are small, of a whitish yellow colour, and a fragrant smell. The fruit is of a yellow colour.

The bark is astringent.

The wild hog feeds on these, and on many other ripe fruits and roots, with which our forests abound. This may account for the firmness and delicacy of its flesh, which is greatly preferred by the knights of the trencher to any thing in the country, turtle excepted.

75. Spondias Mombin, L.—*Brasilian Plum,* or *Spanish Plum.*

Spanish Plum does not seem to be a native of this island, as it is only found about settlements. It grows to a middle size. The bark is smooth and brown; the wood soft, and of

no use. It sheds its numerous shining leaves in January; in April a vast number of beautiful small florets bud forth on the trunks and small twigs, then follow the leaves, and lastly a smooth shining purple plum, of an agreeable taste and smell, containing a hard stone, whose surface seems woven in a net-like manner with cross fibres.

These plums, when full grown, are stewed with sugar into a kind of marmalade, and, if eaten with milk, make an agreeable repast.

The specimen of florets which I examined had only four styles, but it was not worth while to rank it differently on that account.

76. Rhizophora mangle, L.—*Mangrove Tree.*

The mangrove tree grows nowhere else but in salt marshes by the sea-side. Its height is often fifty feet. The trunk seldom exceeds eighteen inches in diameter. The wood is hard, and useful in building houses, especially if made into posts to be sunk in the earth, which will last many years.

The bark of this tree might be useful in tanning leather.

Mangrove leaves are of a shining green colour. The blossoms are yellow; the fruit long and pointed. Some of the branches point directly down into the water, and taking root in the earth, rise again into another tree; so that arcades from ten to fifteen feet high are formed, and in this manner the body of the tree is supported.

77. Crateva gynandra, L.—*Garlic Pear.*

This tree is of the size of a cherry-tree. The leaves are numerous, and of a light green colour. In March and April

the flowers appear. The petals are white, the stamina long and red. The fruit ripens in June; they are of the bulk of a crab-apple, and relished by some people.

The leaves, beaten up into a mass, are useful as stimulating cataplasms, in fevers, with stupor and delirium.

78. Triumfetta rhombeafolia, Sw.—*Paroquet Bur.*

This delights in sunny situations by the road-side, and in open pastures. It grows to five or six feet high. The leaves are broad, soft, and of a lively green colour. The trunk and branches are brown; the blossoms small, yellow, and numerous, are succeeded by many red burs, which, when ripe, stick to one's clothes, and mat the manes of horses.

The bark, soaked for eight or ten days in fair water, then washed and dried, makes a white strong hemp. Some time or other this may be one of the staple articles of this and other West India settlements.

This hemp might be manufactured at a small expence, especially where rivers are near, and would amply repay the manufacturer for his care and ingenuity.

79. Triumfetta.—*Paroquet Bur, with Small Leaves.*

The leaves of this species are very small and numerous. The trunk is grey, smooth and straight, but does not rise so high as the preceding. In other respects the flowers, bur and hemp, differ little or nothing.

The green paroquet feeds on the ripe burs of this and the other two species of the plant.

80. Triumfetta Lappula, L.—*Guinea-Paroquet Bur.*

This plant does not rise so high as the rhombeafolia; its trunk is more branched and knotty. The leaves are darker, and of a different shape. The flowers and burs are similar to the preceding. But it yields a hemp of an inferior quality, on account of the knots and branches.

DODECANDRIA TRIGYNIA.

81. Euphorbia parviflora, L.—*Wart-Weed.*

This may be seen in cane-piece intervals; it is a foot high, and has smooth bluish leaves. The florets are small, and grow together, in a capitulum or button-like manner. On breaking the stalks, a milky juice is emitted, which is applied for the cure of warts and ring-worms.

82. Euphorbia thymifolia, L.—*Wart-Weed.*

The smallest of the above grows in very barren lands, and creeps close to the ground, the stalks are red, as are also the leaves, inclinable to green.

The stalks and leaves, beaten up into a mass, and mixed with rum, are excellent and safe in the cure of ring-worms.

83. Euphorbia hypericifolia, L.—*Wart-Weed,* or *Spurge.*

I am of opinion that the sundry plants of this denomination all belong to the genus Euphorbia. This sort grows in every ground lately dug up. It is used to eat down warts, and is applied to ringworms.

Ringworms are very troublesome, being easily got from contact, or by lying in foul beds, but they are of difficult

cure when of any standing, as they occasion ulcers of an ill kind, nay, often caries of the bone, scarce curable by art. In some parts of Spanish America, ringworms are epidemic and incurable, as they know not the proper applications at first.

In the beginning the spurge may be bruised and applied to the part affected, and it will put the ringworms away. I have often cured them by a small bit of mercurial ointment, but more frequently and radically by the application of sulphur, either in an ointment or plaster. This last seems to be the most effectual in old and inveterate ringworms.

POLYADELPHIA PENTANDRIA.

84. Theobroma cacao.—*Chocolate Tree,* or *Cocoa.*

In former days this tree was carefully and abundantly cultivated in this island; and we have at present a few scattered remains, as monuments of our indolence and want of thought.

The chocolate tree seldom rises higher than twenty feet, and is so shady that the trunk cannot be seen at a distance. The leaves are broad and shining; the blossoms grow from the trunk and larger branches; they are small, and pale red. The pods are four inches long, and two in diameter, furrowed on the outside, and of a yellowish red colour; they contain about twenty seeds, of the size of almonds, imbedded in a sweet pulp.

The ripe cocoa is gathered and put into close casks, to sweat, so that the pulp round the seeds may be rolled out. The nuts are then dried on sheets, and put in bags, for use or sale.

The natives are very fond of chocolate, and great quantities are yearly imported from our Spanish neighbours; this is often rancid: what grows here is much better.

The manner of preparing the nuts, is by gently toasting and grinding them betwixt two smooth stones, when it becomes a mass of the consistence of dough. The whole is made into rolls, and, when dried in the shade, put up for use.

ICOSANDRIA MONOGYNIA.

85. Chrysobalanus Jeaco, L.—*Cocoa Plum.*

This bush often grows fifteen feet high, but will bear fruit when very low. The leaves are of a dark-green colour. The flowers are white, small and numerous.

Cocoa plums are oval-shaped, and are as large as the Orleans plum. They taste sweet, and have a stone the size of a hazel nut, in which is a white kernel, which tastes like the almond.

86. Comocladia integrifolia, L.—*Maiden Plum.*

The trunk of this tree is commonly small, and of a considerable height. It grows wild in woods and unfrequented places, and sends off its branches towards the top, in form of an umbrella.

The flowers spring from amongst the branches; they are numerous, small, and red. The fruit is a berry of the size and colour of the cherry; they taste sweet, and are eaten by the children.

The wood is hard, red, and ponderous; it will take a fine polish, but is too small for the use of the cabinet maker.

87. Psidium pyriferum, L.—*Guava Bush.*

The guava tree or bush grows spontaneously, especially about settlements. The trunks of the oldest trees are seldom more than eight inches in diameter, so that although the wood is hard, it can be of little use to the carpenter. On the outside the bark is smooth and white, on the inside red and astringent; hence it is often made into decoctions to stop watery purgings, as also to tan leather.

The blossoms are white, and have very little smell. The fruit is, when ripe, round, yellow, and of the size of a golden pippin, containing a red or yellow pulp, with many hard seeds. This pulp tastes pleasant enough, but often contains worms.

An excellent marmalade is made of the fruit.

88. Psidium Wrightii, * Herb. Lamb.—*Mountain Guava.*

This is a large, tall, and straight tree, very frequent in woodlands. The trunk is smooth and white. The inner bark is red, and tastes astringent. The leaves are smooth, shining, and of a light-green colour. The flowers are smaller than those of the guava bush. The fruit is rather less, falls off green from the trees, is of the same figure, smells agreeably, and by some is imagined to be more delicate.

Mountain guava trees make excellent inside timber for houses, but it does not last long when exposed to the weather.

POLYANDRIA MONOGYNIA.

89. Achras Sapota, L.—*Naseberry Tree.*

This middle-sized tree seems to be a native of the West Indies. The bark is furrowed lengthways, and cracked acros,

* By a communication from Mr David Don, it appears that this is regarded as a new species of Psidium, and is entered in the Lambertian Herbarium under the name here given.

like Peruvian bark; the tree is shady, and the leaves of a shining deep green. The flowers are small and white. The fruit is round, of the size and colour of a pear. When ripe, they are remarkably sweet, and reckoned one of our best fruits. They contain a few black shining seeds. The tree has a remarkable smell, even at a distance.

A very large tree in the woods differs from this in size, and the bulk of the fruit, which is small, but of the same figure and quality. The barks of both these trees were formerly in great vogue amongst the vulgar for the cure of intermittent fevers, but are now laid aside as at best uncertain: For, either by neglect or unsuccessful treatment, there is great danger of intermittents continuing long, as they too often degenerate into continual, putrid or remitting fevers, which elude the skill of the physician; or if the patient escapes these, the intermittent will form obstructions of the viscera, (and particularly in the liver), producing consequences very difficult to remove.

In all intermitting fevers, I have constantly found the state of the blood very viscid, and sometimes buffy, and I never attempt a cure before an evacuation is made by bleeding. An antimonial vomit is next administered, and the cure completed by the peruvian bark. But if the disorder is of some standing, and by the patient's having a sallow complexion and a fixed pain at the pit of the stomach, it appears that obstructions of the viscera are already formed, then a few mild mercurials will not only remove the obstructions, but the intermittent at the same time.

If the intermittent has turned to a continual or remitting fever, the patient being kept cool, I give the bark immediately; nor did I ever observe it prejudicial where it lies on the patient's stomach; on the contrary, a fair intermission is soon brought about, and the sick person is speedily restored to perfect health.

90. Mammea Americana, L.—*Mammee Tree.*

Mammee trees grow in most woodlands, to a great thickness and height. The outer bark is rough and brown: the leaves are many, broad, smooth, shining, and of a deep-green colour. In June and July the tree puts forth blossoms, whose petals are white, the antheræ are yellow, and are divided into four equal parts; when these drop, they leave one style on the germen.

The fruit called the Mammee Apple, is as large as a man's head; the external covering is rough, and of the colour of a winter pear. The rind is two inches thick, of the colour, and not unlike the taste, of the carrot; some people are fond of eating this fruit, which contains two rough brown woody nuts. The wild hogs of this country greedily eat of it.

It is dangerous to suffer this tree to grow near settlements, or by the road-side, for should its heavy fruit fall on man or beast, it would assuredly break their bones, or kill them on the spot.

On chopping the tree, a thick yellow gum or balsam oozes out. This being melted with fat cures the itch, and prevents the chigres in Negroes' feet. A decoction of the bark is equally efficacious in the cure of the itch, but it is said to tan the skin of white people, and is therefore only in use amongst the Negroes.

Mammee gum tastes hot and acrid, and is said to be possessed of strong attenuating powers; but this seems to be doubtful, as the decoction of the bark is a dangerous poison; and a gentleman who washed a flock of mangy sheep with it blinded every one of them instantly.

91. Corchorus siliquosus, L.—*Pea*, or *Broomweed.*

This rises to five or six feet; has smooth woody stems, many tea-like leaves, small yellow blossoms, and small, long, black pods, full of many indigo-coloured seeds.

92. Bignonia pentaphylla.—*Bastard Cedar.*

This kind of cedar grows in marshes by the sea-side: the trunk is brown, and rough; the leaves are withered-like, and the branches are often beset with the conjugate mistletoe, which destroys many of this species.

In July, nothing can surpass the beauty of the bastard cedar; the flowers are large, numerous, funnel-shaped, and of a pale-red colour: they last but a short time, and are followed by long pods with many seeds.

The blossoms are said to be an antidote against the manchioneel poison-apple.

93. Crescentia cucurbitina, L.—*Marsh Calabash.*

Near the sea, and in brackish marshy places, we find this middle-sized tree. The leaves are of a shining green: the blossoms grow on the branches. The calabash is pointed, and six or seven inches long.

Some think this to be the Indian dye, but by some experience I find it not to be so.

94. Verbena nodiflora, L.—*Ipecacuanha of Father Labat*, or *Velvet Bur.*

This plant grows in cultivated lands, and in cane-piece intervals. The leaves feel rough, and are covered with a kind of down. The blossoms are disposed in globose heads, and are

small and white. These are succeeded by a smooth flat bur, containing many hard capsules, of a chocolate colour.

The stems of this plant are quadrangular, and jointed; the fresh roots are very like the true ipecacuanha, but lose their wrinkled appearance when dry, nor have they any emetic quality. Decoctions of the plant are said to be astringent, and are given in female complaints and dysenteries, with good effect. For this last purpose, however, we are acquainted with more powerful medicines.

DIDYNAMIA ANGIOSPERMIA.

95. Brunsfelsia Americana, L.—*The Cup Berry-Bush.*

This is a low shrub; it has long, narrow pointed leaves, of a shining green colour, growing thick on the branches. The flowers are funnel-shaped, long and white. The berry is yellow, soft, and agreeable to the taste, containing many seeds.

96. Ruellia Blechum, L.—*John's Bush.*

The stem of this plant is herbaceous, square, and jointed; from each joint grow four leaves; the flowers are bell-shaped and blue; the seeds naked and black.

The juice of the leaves, mixed with tincture of gum guaiacum, is used in erosions of the palate in venereal disorders, and in yaws.

We have many deplorable instances of the dreadful effects of these American maladies. The loss of the palate is common, and I have made cures where several spongy bones have been separated, and where the nasal bones have dropped out.

These disorders in an advanced state, will yield to a similar method of cure, viz. mild mercurials, mixed with dia-

phoretic ingredients, so as to give the mercury a tendency towards the skin; and a constant diet-drink of sarsaparilla, lignum-vitæ, sassafras, and the like.

TETRADYNAMIA SILICULOSA.

97. Lepidium virginicum, L.—*Pepper Grass.*

Pepper-grass grows wild in most places of Jamaica.

It is a very pretty plant, and its taste is nearly similar to that of the garden-cress, for which it is often substituted in sallads.

TETRADYNAMIA SILIQUOSA.

98. Cleome triphylla, L.—*Indian Cress.*

Indian cresses grow in lands lately hoed, or dug into cane-holes. The plant is annual, herbaceous, and two feet in height. The flowers are white, pods round, and two inches long, having many seeds. The leaves are of a deep green colour. They taste very like the garden-cress.

MONADELPHIA PENTANDRIA.

99. Passiflora quadrangularis, L.—*Granadilla.*

There are two kinds of passion-flower, or Granadilla vine, cultivated in Jamaica; the leaves are broad, shining, and green; the flowers are most beautifully variegated, blue and white. One has a fruit as large as a water-melon; that of the other is much smaller, and the smaller sort is by far the best.

Ripe granadillas have a pleasant acid taste, and are ranked with our best fruits. In ardent fevers, these and other acid fruits are extremely grateful and salutary.

100. Passiflora suberosa, L.

The passiflora suberosa is a creeping small slip, growing in fences; the leaves are shining, and of a deep green colour; the blossoms yellow, and small; the berries oblong, black, and shining; the juice is sweet, and stains linen black.

The seeds are small and numerous. The use of the plant is unknown.

101. Passiflora perfoliata.

This p ant is found in logwood-thickets; the leaves are shining; the flowers beautifully purple, tubular, and an inch long; the fruit is of the size of a gooseberry, has a sweet purple juice, and many small seeds.

We know nothing of its use.

102. Bombax pentandrum, *L.—Silk Cotton-Tree.*

The cotton-tree grows quickly to a great height and thickness; like your stately oak it has branches large and spreading. The trunk is straight, smooth, and grey. The wood is soft, and is hollowed into canoes.

The gum is of an amber colour, but indissoluble.

Cotton-trees are amongst the few trees that shew the approach of winter, in these latitudes, by shedding their leaves in November and December. In February, there appear an immense quantity of flowers, of a reddish-white colour. The petals are five, and are covered with a shining silken down. The stamina are five, and the stile is pretty large. The pods are larger than a pear, containing a kind of fur, and many seeds. They dry and split on the tree, the down expands, and each seed flies off with the breeze, with a portion of down in a globular form.

This cottony substance seems to be rather short for making hats, but is commonly gathered to fill beds instead of feathers. When the fruit is full grown, the tree is cut down, as then the greatest quantity can easily be picked. Beds of this kind must often be exposed to the sun, else the cotton will get into clots.

The young leaves are again put forth, when the fruit is almost ripe. They are often boiled as greens, and used as tea in fevers, &c.

103. Melochia tomentosa, L.—*Bastard Hemp-Agrimony.*

By the road-side, in fences and waste lands, we meet with this perennial plant. From one root spring many long, smooth, and flexible stems, whose bark is brown. The leaves are of a light colour, furrowed and serrated, and the white blossoms grow in clusters, from a foot or more towards the summit, and very thick.

The seeds are numerous.

The stems laid in water, afford a kind of hemp.

104. Ochroma lagopus.—*The Down Tree.*

It has before been remarked that authors confound this tree with the ceiba; as they are very different plants, I have arranged each in its proper place.

The down tree grows speedily to a good height, but no great thickness. The trunks are straight and grey. The leaves broad, and of a light green colour. The blossoms are the largest of the monadelphiæ that I have yet seen, and therefore not easily laid down in a dried collection. The fruit is long, round, and furrowed; when ripe, the outer husk falls off, and the down, which is of a silken appearance, expands, and looks somewhat like a hare's foot. The seeds are numerous.

The wood of this tree is soft, spongy, and so light, that

fishermen use it instead of cork-wood to suspend their nets. The leaves and blossoms are emollient, and used in fomentations and cataplasms.

The bark makes a hemp of a reticular form, but of little strength.

MONADELPHIA DODECANDRIA.

105. Theobroma guazuma, L.—*Bastard Cedar.*

Bastard Cedar grows wild in woods, particularly near the sea. The tree is middle sized. The bark is grey and furrowed; the wood soft and useless; the branches long and spreading. The leaves are of a light green colour. The flowers are small, numerous, and yellow. The fruit is black, round, and of unequal surface, and tastes sweet.

MONADELPHIA POLYANDRIA.

106. Urena sinnata, L.—*French Barley Bur.*

This plant delights in shady places, by the road-side; and has been known to rise ten or fifteen feet high. The trunk is grey, and seldom exceeds one inch in diameter. The leaves are broad, smooth, and shining. It puts forth white blossoms in autumn, and continues flowering several months. The petals are five, and lapped over each other, agreeable to the motion of the sun.

The ripe burs resemble linseed bows, and contain four seeds similar to barley, hence the name. They are farinaceous, and are eaten by rats.

The plant is mucilaginous, and consequently emollient; I discovered that it, and every other of this class, make hemp, when steeped for some time in water, as shall afterwards

be shewn. They require longer or shorter immersion, according to the age of the plant: and the hemp or flax differs in quality and strength, according to its nature; and, in point of colour, as it may happen to be soaked in running water, clear ponds, or muddy holes. These simple hints may induce some fit person to make experiments with the plants of this class in Britain, whose strength depends so much on her naval force, and whose treasures are yearly expended in purchasing hemp and flax from foreign nations, when she might at less expence be supplied at home, or in her extensive colonies.

This species requires that the bark be stripped, and soaked for four days. The flax or hemp is very strong.

107. URENA AMERICANA, L. var.—*Bur-Mallows with deep indented Leaves.*

This grows in moist places, by the highway; having many green stalks springing from one root, long, smooth, and slender. The leaves are very pretty. The blossoms appear in June, and the bur, which is ripe in August, is prickly, and opens in five parts, when ripe, to discharge as many heart-shaped seeds, of a chocolate colour.

The stalks require about eight days' soaking, when they yield a hemp of tolerable strength.

108. PAVONIA SPINIFEX, L. var.—*Jamaica Mallow*, or *Spur-Bur.*

This grows wild in shady places, and in fences, having many long, smooth, slender stalks, springing from one root These have a few furrowed leaves, and pretty large blossoms, whose petals are lapped over, contrary to the motion of the sun.

The fruit is a bur, which sends off from each side long prickles, and resembles a spur—hence the name.

The stalks macerated in water, yield a pretty strong hemp, and the plant, like other mallows, is emollient.

109. Malachra capitata, L.—*Pond Mallows.*

This prickly plant is frequent about ponds, and grows to two feet high. The stem is as thick as one's finger, and furnished with a vast number of downy prickles, as likewise are the leaves. The blossoms grow on the top of the plant, are small, numerous, and pale red; the seeds are heart-shaped. This plant is very mucilaginous, and no doubt possessed of the virtues of the mallow tribe.

A kind of flax is obtained from the bark.

110. Hibiscus elatus, Sw.—*Mahoe Tree.*

The Mahoe tree delights in moist soils, where it rises to a great height, and considerable thickness, sending off many branches, well shaded with broad leaves, of a lively green colour.

The blossoms are large, and their petals lap over each other, agreeably to the motion of the sun. Some of these are red, others yellow or mixed.

The pods are of the size of a walnut; when ripe, they split open, like a star, and drop many black heart-shaped seeds.

The timber is only used in staves and heading for sugar hogsheads, being soft, porous, and of a green colour, besides smelling strongly of balsam Capivi.

The inner bark of the young trees and shoots is stripped off, and twisted into ropes for plantation use. If these are macerated in water, a shining hemp is obtained of considerable strength.

111. Achania malvaviscus, Sw.—*Red Mahoe.*

This shrub grows, in copses and shady places, to nine or ten feet high, sometimes more. The trunk is brown in the young trees, and grey in the old; it is seldom more than two inches in diameter. The leaves are broad, and of a lively green colour. The blossoms are of a beautiful crimson, and the five petals lap over each other, agreeable to the motion of the sun. These petals never expand, but are contracted round the stamina, which project a good way above.

The berry is red, and of the bulk of a small cherry; when dry, it opens in sundry compartments, and contains many heartshaped seeds.

The bark of the young trees makes a fine, white, and very strong hemp.

112. Hibiscus mutabilis, L.—*Changeable Rose.*

This shrub is cultivated in gardens. The trunk is woody and knotty; the leaves broad, and of a light-green colour. The blossoms are large like a rose; and, what is remarkable, these flowers change from white to red, and from red to white, two or three times in twenty-four hours. The plant afterwards bears a round hairy pod, full of small seeds.

The bark of this, like others of the same class, yields hemp or flax, but the knots of the bark make it good for nothing.

113. Hibiscus moschеutos, L.—*Musk-Seed,* or *Wild-Okra.*

This grows wild in fields and copses. The stem is sometimes four feet high, and is thick set with hairy prickles; so are also the dark green leaves, which resemble okra.

The pods are full of black seeds, which, when rubbed in

the hand, emit a strong smell like musk, and would seem to claim a place amongst the cordial medicines.

Some Negroes boil and eat the young pods as okra. The bark being put eight or ten days in water, makes a hemp, but of no great strength.

114. Hibiscus sabdariffa. L.—*Red Sorrel.*

We plant this in gardens and inclosures. It rises to four or five feet high. The stems are herbaceous, and red; the leaves of a reddish green; and the blossoms of a pale red colour. The pods are round, unequal, and pointed; they open like okra, and discharge many heart-shaped seeds.

The red pods, before they are quite ripe, are cut and sliced; gently boiled with water; sweetened with sugar; then bottled up, and in a few days make a sparkling and pleasant acid liquor, called "cool drink," which, however, does not keep but for a short time.

The fruit also make a good ingredient in tarts.

115. Gossipium.—*Cotton-Bush.*

We have three sorts of cotton cultivated in this country, viz. the common (*G. arboreum*), bearded (*G. hirsutum*), and the French cotton (*G. barbadense*). The two former are never suffered to grow above four or five feet high, for, by lopping the main stem, a great many branches are sent off, and, of course, many broad leaves, and large yellow flowers, whose petals are lapped agreeably to the sun's motion. The pods are of the bulk of a pigeon's egg, and of a conical figure; at first they are green, then brown, and at last black; when, if not gathered, they split in three divisions, and the cotton expands. The seeds of the common cotton are smooth; those of the bearded have a little tuft of cotton fastened to the apex; both are black, and heart-shaped, and, as they

easily separate, are in common use. Their staple is not so fine, nor have they that glossy silken hue, that appears in the French cotton.

The French cotton bush grows taller, and more luxuriant, than any of the others, and bears abundance of pods, which contain a fine cotton, as before observed. But this adheres so close to the seeds, that they can hardly be separated, unless picked by hand.

Cotton-pods ought to be gathered before they split, dried in the sun on sheets; picked from the husks; beat with small rods to separate the seeds; then ground, by passing betwixt two small grooved rollers, turned by wheels; then firmly packed into bags, and sent home for use. Cotton should be planted in June, and it will be ripe in March. It is a very unprofitable plant. The bark makes a shining soft flax.

116. Sida rhombifolia, L.—*Common Broom-weed.*

Dr Grainger calls this species of plants the American clock, as they expand their petals at eleven, and again shut them by two in the afternoon. This does not hold true in all the plants of this denomination, and seems to depend on the weather as well as the time of the day.

There are many of the mallow kind called broom-weed, from the similitude of their flowers; from their being cut and tied for broom; and from their being in use for scouring houses and washing Negroes' clothes. Pounded and squeezed, they yield a mucilaginous juice, which, on mixing with any greasy substance in clothes, &c. answers all the purposes of soap.

117. Malva spicata, L.—*White Broom-weed.*

This grows in pastures, fences, and waste grounds, rising sometimes four feet high. The leaves are of a light green co-

lour; the small yellow blossoms grow thickly in a spike; the pods are small, and the seeds resemble in form others of this genus. I suppose it to have similar virtues with other malvaceous plants.

The bark makes strong white hemp.

DIADELPHIA DECANDRIA.

118. Erythrina corallodendron, L.—*Bean Tree.*

The bean-tree is cultivated in gardens, and is as tall as a cherry-tree: as it is shady, and of quick growth, it is likewise planted around ponds, to prevent the evaporation of the water by the rays of the sun; the trunk and branches are knotty and prickly; the leaves are broad, and of a lively green. In May and June the tree is full of beautiful red blossoms; the pods and seeds very small.

Bean-trees are of speedy growth, and chiefly planted for ornament. We are strangers to their medicinal virtues.

119. Hedysarum canescens, L.—*Fever Weed.*

We find this plant in fences or thickets, either creeping on the ground, or supported by bushes. The leaves are of a light green colour; the blossoms are pale red, and grow in a spike: the pods are jointed, and feel rough; they stick to people's clothes: the seeds are flat.

A tea made of the leaves is said to be diaphoretic, and sudorific; it is given in colds and slight fevers by the lower sort of people here.

120. CYTISUS CAJAN.—*Pigeon Pea.*

In Jamaica are found as great a variety of the bean and pea tribe as in any part of the world. As there is nothing very remarkable in these, we shall pass them over; and in this place only take notice of the Pigeon Pea tree or bush, growing to ten or twelve feet high. It has woody trunks and branches, with pretty leaves, of a light green colour: the flowers are numerous, pretty large, and of a bright yellow; the plant, for the most part, is continually in bloom. The pods generally contain four peas, of the size of garden peas; when green, they are very fine; and when ripe, make good soup.

A decoction of the leaves is deemed vulnerary and restringent, and serviceable in uterine hemorrhage and weaknesses; outwardly, it is often of use in ophthalmic cases.

121. ABRUS PRECATORIUS, var. MELANOSPERMA, L.—*Black Liquorice Vetch.*

This grows in copses, and the leaves and blossoms are so like the bead-vine, that the one cannot be distinguished from the other till the seeds are ripe.

These vetches are of a shining black colour, with yellow eyes.

122. INDIGOFERA TINCTORIA, L.—*Indigo Plant.*

The indigo plant grows wild in many parts of this island. It rises from four to six feet high. The stalks are woody, the leaves are of a bluish green colour; the blossoms grow in a spike, and are pale red, small, numerous, and beautiful: the pods are small, black, and curved, containing small seeds, like the grains of gunpowder.

In former days, the indigo planters here got soon rich;

but a piece of bad policy took place: a heavy duty was laid on this commodity, and the consequence was, that the manufacturer found that the indigo was by no means worth his while. The duty is now taken off, and a few adventurers have begun again to make this article, which we were of late years obliged to buy from other nations.

There seems to be no great art in making indigo. The plant at three months old being cut, is put into a clean vat, with as much water as will cover it for a night, or less, if the weather is hot. The green water is strained off into a clean vessel, and beaten two hours with a churn-staff, adding by degrees one-sixth part of clean lime-water. The blue liquor is allowed to settle; the clear liquor being drained off by a plug, and thrown away. The thick blue mass is put into Osnaburgh bags to drain; it is then spread on flat vessels to dry in the shade, and is afterwards formed into shining round cakes.

This plant ferments surprisingly soon, and becomes offensive. No wonder the labourers are unhealthy, since, by the old method, it was steeped three days.

123. Hedysarum canescens, L.—*French Honeysuckle*, or *Fever Weed*.

This plant has woody stems of a brown colour, ternate leaves, and pale red blossoms growing on a spike. The pods are rough and jointed, each joint containing a flat seed.

The country people make an infusion by way of tea, of the leaves of this plant, and use it for a sweat in colds, and in the beginning of inflammatory fevers; but I am afraid to no good purpose, since commonly in these disorders the blood is buffy, and the patient requires large bleeding, evacuations, and dilutions.

It is a vulgar error, and to it I believe the destruction of many a patient is owing, that the blood of people within the

tropics is thin and dissolved. From many years' residence in the West Indies, I can aver, that buffy blood is just as frequent here as in any other climate whatsoever; and requires bleeding freely and repeatedly, to conquer the viscidity.

124. Cassia Chamæcrista, L.—*Bastard Sensitive Plant.*

The larger bastard sensitive plant grows in low moist grounds, and in low, level, cane-piece intervals, rising to two feet. The stem is herbaceous, and without prickles; the leaves like those of the tamarinds, contract on being touched; the flowers are yellow, and irregularly pentapetalous; the cods are brown, flat, and contain three or four veniform black seeds.

Dr Isaiah Burgess, who practised many years in the West Indies, discovered this plant to be a powerful antidote against vegetable and fish poisons.

It will hardly be credited, nor do I affirm it for an entirely established fact, that every part of this plant above ground is poisonous, and that all below the earth is a powerful antidote against all vegetable and fish poisons, as well as against the poison of the leaves and stems of the same plant. I have had, however, frequent opportunities of experiencing its powerful effects in cases where vegetable poison had been given.

The symptoms of vegetable poison, are a loss of appetite and colour, weariness, universal pains, soreness in the breast, difficulty of breathing, burning at the pit of the stomach, voiding of blood up and down and vomiting of green *poracious* bile: followed sometimes by a sudden, but often by a languishing, death. Some of our dexterous Africans are said to dose out their baneful secrets, so as to poison in a few days, months, or years; and this they practise not on their owners only, but on each other, of which too many melancholy instances have happened of late years. Whenever I suspect poison, I prepare a decoction of a handful of the washed roots

of this plant, boiled from three to two quarts of water, and give a large wine-glassful of it, warm, every hour, if urgent symptoms appear, or as often as may be thought necessary, to complete a cure. Several cases have occurred where poison had certainly been given; and I have had the satisfaction to observe, that the first glass gave immediate relief; a few more obviated every dangerous symptom, and the patient was restored to perfect health. If former poison is suspected, this pleasant decoction may be used for common drink.

SYNGENESIA POLYGAMIA SUPERFLUA.

125. Artemisiæ similis, Ambrosia elatior, L. *Wild Wormwood.*

This grows in pasture grounds, from four to six feet high; it has woody stems, many branches, finely compounded leaves, and many small blossoms and seeds.

It resembles common wormwood; has a pleasant smell, but no bitter taste: we only use it in fomentations and poultices.

126. Parthenium hysterophorum, L.—*Wild Parsley.*

This is a common weed in gardens, and other cultivated grounds; it is two feet high, has compound light coloured leaves, many small button-like flowers, and small black seeds. It is used in fomentations, or beaten up with lime-juice, to deterge foul ulcers.

127. Conysa odorata, L.—*Wild Tobacco.*

The fox-leaf, or wild tobacco, grows by the road-side, or in bushy pastures, to ten or twelve feet high: the stalks are woody; the leaves are broad, rough, and of the colour of

sage, with somewhat of its smell; the blossoms are red, and the ripe seeds are wafted by their down with the wind.

The fox-leaf is used in fomentations, and applied outwardly in sore throats.

The putrid sore throat is at this time (July) epidemic, and has proved fatal to many, particularly to children. I find my neighbouring practitioners treat the disorder, by frequent bleedings, purges, blisters, and the bark: these, instead of relieving, generally hurry the patient off the stage. I am happy in being successful by a small single bleeding, very gentle laxatives or glysters, a constant use of antimonial wine, gargles of infusion of roses and lime-juice with common salt; I suffer no nurse either to use the finger, or a stick with a rag, to wash their tender throats: in a few days the white slough separates, and the cure is finished by the bark.

SYNGENESIA POLYGAMIA NECESSARIA.

128. Coreopsis bidens, L.—*Spanish-Needleweed.*

This plant has herbaceous stems, compound dark-green leaves; flowers very like camomile, and numerous needle-like seeds. It grows in fences, and shady places; has a strong turpentine smell, and is used by the common people in ptisans and glysters for nephritic disorders, and in bellyachs attended with strangury.

MONŒCIA MONANDRIA.

129. Cynomorium Jamaicense, *Sw.*

This plant is found in woodlands, in the months of April

and May only. It is four inches high, solid, thicker than a man's thumb, and of a blood-red colour.

In a recent state, several pentapetalous florets may be observed growing on the sides.

The fungus melitensis has long been recommended as a mild and safe astringent. I have seen its good effects in checking watery purgings and dysenteries, when the inflammatory symptoms have first been taken off. A dose in powder, or in decoction, from one to two drachms is sufficient. Infused in wine or spirits, it makes a rough tincture, which, when added to tincture of Peruvian bark, becomes a noble medicine in weaknesses of the stomach and bowels.

MONŒCIA PENTANDRIA.

130. Amaranthus sanguineus, L.—*Bleeding Hearts.*

Spanish caliloo, or my love-lies-bleeding, is cultivated in gardens and in provision grounds. The plant is four feet high, has herbaceous stems, red leaves, and beautiful purple blossoms; the seeds are small, black, and shining, like the grains of gunpowder glazed.

When the plant is cut young it makes excellent greens, and the young stems are as good as asparagus.

131. Amaranthus viridis.—L. *White Caliloo.*

Caliloo is an Indian name for the sundry plants of this figure. This species grows wild in newly cultivated lands, and cane-piece intervals. Its figure is like the former, only the leaves and blossoms are green. It is used in the same way, and grows to the same height.

132. AMARANTHUS SPINOSUS.—L. *Cane-Piece Calilou.*

This is chiefly met with in cane-piece intervals; it is one or two feet high, has red prickly stems; leaves lightly green, and blossoms white and brown. The seeds are black as the above.

This is the most common and readiest green in use here, and by some is preferred to spinach. It is often an ingredient in our celebrated pepper-pot.

MONŒCIA POLYANDRIA.

133. ARUM GRANDIFOLIUM, Jacq.—*Wild Sarsaparilla,* or *Cubeso Withe.*

Jamaica sarsaparilla, or Cubeso withe, grows in swampy woodlands; it runs up trees, and clings round them by small lateral fibres; the leaves are broad, shining, and of a light green colour; the blossoms, a spadix growing out of a spatha, and resembling those of the eddoes and dumb-cane; the seeds are numerous, and of an irregular figure.

The trunk is grey, jointed, and two inches in diameter; when cut, a thick white balsam runs out, which smells like turpentine. From the lower extremity of this trunk issue many brown roots, which reach from the tops of the highest trees to the ground; by these the plant is partly nourished, and partly by the earth about its trunk, accumulated by the rotten leaves, ants, &c.

If it is allowed that sarsaparilla decoction has any other virtue, besides being a diluent, tepid and farinaceous drink, to accompany the use of mercurial alterative medicines,—then it will readily be allowed that this plant possesses those qualities in a more eminent degree, on account of its strong smell

and taste. In fact, we find it so, and are at no expence in getting it.

MONŒCIA MONADELPHIA.

134. Cucurbita lagenaria, *L.—Gourd.*

We have a great variety of gourds. They differ in size, shape, and virtue.

The large gourd, when freed of its pulp and seeds, will hold from six to ten gallons of water. The Negroes make an instrument of it somewhat like a guitar, which they call a Banga, and play many tunes on it, not indeed very harmoniously.

Some gourds are shaped like bottles; some are cylindrical, and serve for powder-horns. The small round gourds are the *Cucumis colocynthis*, or bitter gourd, of Linnæus, and grow wild in many parts of the country. Their drastic juice is used by some people to remove obstructions of the catameniæ. Lewd wenches have been known to procure abortion by a large dose of the juice of these plants.

135. Cucumis Anguria, L.—*Wild Pompion.*

The fruit, when ripe, is yellow, feels soft, and has an uncommon smell, resembling spirit of nitre, but not so agreeable, for when held up to the mouth or nose, it is apt to excite nausea and vomiting.

The vines of the wild pompion wither so soon as the fruit is ripe.

The birds and ants eat the pulp before the fruit falls.

136. Hura crepitans, L.—*Sand-Box Tree.*

The sand-box tree grows to the size of a cherry-tree. The leaves are of a lively green. The blossoms, both male and female, grow on one tree, and often on the same twig. The fruit is round and flat, and its pericarpium is divided into many regular compartments, each containing a flat seed or kernel, which tastes like an almond, but it is said to be emetic. The pericarpium is often converted into sand-boxes.

137. Momordica charantia, L.—*Sarasee Vine.*

This vine is planted by, and runs in, fences and bushes. The leaves are numerous, and of a light-green colour; the blossoms yellow; the fruit shaped like a cucumber, but rough and prickly. When ripe, it is soft and yellow, and has many red smooth seeds.

The fruit is sweet, and anthelminthic, as are also the leaves boiled in broth.

DIŒCIA MONANDRIA.

138. Brosimum Alicastrum, Sw.—*Bread-Nut Tree.*

This tall, shady, and beautiful tree grows on rocky lands, principally on the north side of Jamaica. The trunk is straight, grey, and scaly; the leaves smooth, shining, and of a deep green; the blossoms pale yellow, and like a button. The fruit is yellow, and of the size of a plum; besides a thin layer or sweet pulp, it contains a round nut seemingly divided in the middle.

Of late we had three successive years of dry weather; perhaps a greater drought was never experienced in this or any other country. The canes were withered and dried up, so that

in several parishes hardly any sugar was made. Our ground provisions, as plantains, yams, cocoes, cassada, &c. failed, and a famine would, in all probability, have ensued, had we not been seasonably relieved each year by the falling of the bread-nuts, which were carefully gathered, dried, and put up for use. These nuts being boiled and skinned, taste somewhat intermediate between a potato and a bean, and eaten with fish or salt, prove a very nourishing food.

The dry weather also burnt up our pastures; not a pile of grass was to be seen, except under the shade of trees and bushes. Our cattle and stock died in large numbers and tainted the air with noxious exhalations. In short nothing seemed to prosper but dogs, the carrion crow, and the vulture of Brazil.

Bread-nut leaves are excellent food for horses and cattle; but in dry seasons they are bitter and gummy, and do not seem to answer without a mixture of other food.

The heart-wood of the bread-nut tree is often hollow. The rest is red like mahogany; is very solid and ponderous, and will take a fine polish; it has lately come into great repute for cabinet work.

DIŒCIA DIANDRIA.

139. Cecropia peltata, L.—*The Trumpet Tree,* or *Snake-wood.*

In loose lands, which have been in culture, this tree is very common; it grows as high as fifty feet. The trunk is grey, and adorned with annular circles, at every six or eight inches, which correspond with so many woody divisions in the hollow middle part.

The leaves are broad, and white underneath, but green on their upper part. The young buds are sometimes used as greens.

The fruit is a long fleshy catkin, not unlike long pepper, and disposed in clusters of from four to fifteen. The florets are invisible to the naked eye. The seeds are numerous, and exactly like long pepper. The fruit is eaten by some people, and by most birds.

The bark is tough, and is twisted into cordage, for plantation use; but it soon rots with water.

140. Viscum verticillatum, L.—*Black Berried Mistletoe.*

This species of mistletoe is generally found on the alligator pear tree, which in time it destroys by its weight.

The leaves are of a light-green colour; the flowers small and red; the berries oval shaped, small, black, and shining.

Mistletoe is supposed to be a specific in the epilepsy. Dr Hillary recommends that which grows on the lime-tree as an excellent astringent in fluxes.

141. Viscum opuntioides, L.—*Mistletoe.*

This is found on the highest trees, and particularly on the bastard cedar. It has narrow conjugated branches, with blossoms and berries as the above.

DIŒCIA TETRANDRIA.

142. Morus tinctoria, L.—*Fustick Tree.*

Fustick trees are sometimes of a great size, and are very shady; the external bark is grey and rough; and, on wounding the tree, a bitter yellow juice runs out.

The male flowers are small and green, in long crooked catkins. Those of the female are round. Fustick berries are round, and of the size of a rasp-berry; they are soft, green, and have a cloying sweet taste.

The wood has long been known as a dye, and it is a very useful timber for mill-rollers, naves for wheels, &c.

The leaves of this mulberry are of a deep-green; they might be used for feeding silk-worms, and, were skilful people employed, would turn to good account. At present we are intent on making sugar, rum, and the other staple articles already known, nor do we care to go beyond our depth.

DIŒCIA PENTANDRIA.

143. Antidesma Alexiteria, *L.—Murjo,* or *Bitter Bush.*

The murjo or bitter bush is frequent in pastures and savannahs, and grows to ten or twelve feet high. The bark is of a grey colour, the wood is soft, and of little use. The leaves are numerous, smooth, shining, and of a rusty colour. The blossoms are very small, and grow in a pendulous raceme. The berries are at first red, afterwards black, growing in clusters, and having a very good appearance. Their taste is exceedingly bitter, as is that of the leaves. Of these a decoction is given internally in bad habits for the cure of external ulcers. They are no doubt antiseptic; and, by strengthening the stomach, good juices will be sent into the blood. They are likewise applied by way of fomentation and poultice to foul and ill disposed ulcers, with very good effect.

DIŒCIA HEXANDRIA.

144. Smilax Pseudo-China, *L.—China Root.*

China root grows in moist woodlands. The stem is green, strong, flexible, and jointed every eight or ten inches. The leaves are of a shining green colour. The root is well known in the

shops, and might here be employed in alterative decoctions, did we not come at it on such moderate terms.

DIŒCIA DECANDRIA.

145. Carica Papaya, L.—*Popaw Tree.*

This tree is of speedy growth, bearing fruit in less than a year, and being often fifteen or twenty feet high.

The trunk is grey, has a large pith in the middle, and when dry the wood is of a reticular form, and good for nothing. Towards the top it sends off long spreading leaves, in form of an umbrella. The blossoms grow amongst the leaves; those of the male are long and branching, those of the female short and fleshy.

The popaw fruit is as large, and of the same shape, colour, and taste, as a musk melon. The seeds are enveloped in a jelly, and, on being disengaged from it, look like the grains of black pepper. They taste like the garden cress.

However salutary when taken into the stomach, the juice of the fruit, or that from the body of the tree, when inoculated into the blood, produces palsy, with obstructions of the liver, and of the other viscera, which are very difficult to cure.

If a piece of tough meat be washed with water in which the popaw has been infused, it makes it very tender and delicate.

POLYGAMIA MONŒCIA.

146. Mimosa scandens, L.—*The Cacoon,* or *Mafooloo Withe.*

This climber arises from a brown spongy trunk, as thick as a man's thigh. It runs up, and covers the highest trees, and running from one to another, extends over some acres of

woodlands. The leaves are numerous, and of a shining green. The blossoms are yellow, and grow in spikes.

The pods are very large, a yard in length, and four inches broad, containing sundry large beans, of a hard texture, and a smooth brown surface.

The beans are sometimes used by the Negroes; they break the hard shell, roast the woody kernel, then soak it some days in water; and, lastly, boil it in a pot, beat it into paste, and use it as food.

The bean or nut is supposed to be an antidote against poison, and pain of the stomach. We have before observed how little credit is due to such assertions.

147. Mimosa.—*Wild Tamarinds.*

There is no tree more common in our woods than the tamarind tree, and few or none so beautiful in its foliage. The height and thickness is considerable; the outer bark is tough and grey; the wood is hard and solid, it takes a good polish, and is one of the best building timbers we have in this country; the blossoms are white and globular; the pods long, crooked, and of a scarlet colour, containing five or six, black, soft, and shining beans.

148. Mimosa.—*Wild Tamarind,* or *Shag Bark.*

This differs very little from the preceding, except in its leaves, which are a little broader, and its wood whiter.

It is a fine timber for building.

CRYPTOGAMIA FILICES.

149. CYATHEA ARBOREA, *Sw.*

The tribe of ferns is very numerous here; none seems to merit so much attention as the fern tree. It is found in woody shaded places, and is twenty feet high. The trunk is rough, jointed, and hard, and has a large pulp in the middle. Towards the top, it sends off beautiful long leaves, and looks like an umbrella.

A

BOTANICAL AND MEDICAL ACCOUNT

OF THE

QUASSIA SIMARUBA,

OR TREE WHICH PRODUCES THE CORTEX SIMARUBA.

[This paper was originally read before the Philosophical Society of Edinburgh, August 6. 1778. It was afterwards printed in the second volume of the Transactions of the Royal Society of Edinburgh, Part II. page 73.]

An Historical Account of the Simaruba Bark.

The first knowledge we had of the Cortex simaruba, was in the year 1713. Some of it was sent to France to M. le Compte de Porchartrain, the Secretary of State, as the bark of a tree, called by the natives Simarouba, which they employed with good success in dysentery.

In 1741, M. Geoffroy, in speaking of this bark, says, "Est cortex radicis arboris ignotæ in Guiana nascentis, et ab incolis Simaruba nuncupatæ: coloris est ex albo-flavescentis, nullo odore preditus, saporis subamari, lentiscentibus fibris constans, candido, levissimo, insipidoque, radicum, stipitum, truncique ligno hærens, a quo facile separatur."

In 1753 and 1760, Linnæus makes the simaruba to be a species of pistacia, or the Terebinthinus major, betulæ cortice, fructu triangulari, of Sloan. Jam. 289. t. 99.

In 1756, Dr Patrick Browne published his Civil and Natural History of Jamaica. At page 345, he describes the terebinthinus, or birch and turpentine tree. The bark of the roots (says he) is thought to be the simarouba of the shops.

In 1763, Linnæus makes the simaruba to be the Bursera gummifera, and refers to the pistacia of former editions of the Species Plantarum, and to Browne and Sloan, as above cited. In the Appendix, a reference is made to the terebinthinus Americana polyphylla. Commelin, Hort. i. p. 149, and to Catesby's gum elemi tree.

M. Jacquin visited all the West India Islands, and made many discoveries of new plants. He examined the roots of the Bursera gummifera, and found their bark very different from the simaruba bark.

In 1772, I employed all my spare hours in examining the plants of Jamaica. In this delightful walk of science, I discovered and ascertained many hundreds of new plants which had escaped the diligence of former botanists,—amongst others, the tree which produces the simaruba bark.

In 1773, specimens of the fructification were sent in spirits, accompanied with a botanical account of the tree, to my late worthy friend Dr Hope, Professor of Botany in the University of Edinburgh; also some dried bark from the roots. The following year specimens, with similar descriptions, were transmitted to my late learned and valuable friend Dr John Fothergill, of London, who sent them to the celebrated Linnæus, at Upsal, as appears by Professor Murray's Apparatus Medicaminum, vol. iii. p. 458*, article *Simaruba*. Dr Fothergill caused elegant drawings to be made of this

* Qualis vera ejusdem arbor sit, jamjam Aubletii indagine cognoscimus, ut tamen et mihi monere incumbat, Cl. Linnæum equitem, litteris jam anno 1776 ineunte, mihi datis, antequam Aubletii elegantissimum opus illi innotesceret, significasse, simarubam quassiæ species a se haberi. Ille autem simarubæ cortex quo Cl. Wright, arborem in Jamaica, vulgarem vestitam esse innuit; pariter in alvi profluviis efficaci, &c.

plant; and these drawings I now have the honour of presenting to the Royal Society of Edinburgh.

It is here proper to remark, that this paper was read before the Philosophical Society of this place, and committed for publication in 1778. At the time when that Society obtained the Royal Charter, I chanced to be abroad. On my return to Edinburgh, I withdrew the communication to correct, and add to my account of this important article of materia medica.

Description of the Tree.

The tree now to be described is common in all the woodlands in Jamaica. It grows to a great height and considerable thickness. The trunks of the old trees are black and a little furrowed. Those of the young trees smooth and grey, with here and there a broad yellow spot.

The inside bark of the trunk and branches is white, fibrous, and tough. It tastes slightly bitter. On cutting or stripping off this bark, no milky juice issues, as has been mentioned by various authors.

The wood is hard and useful for buildings. It splits freely, and makes excellent staves for sugar hogsheads. It has no sensible bitter taste.

The branches are alternate and spreading.

The leaves are numerous and alternate. On the upper side they are smooth, shining, and of a deep green colour. On the under side they are white.

The flowers appear about the beginning of April: they are of a yellow colour, and placed on spikes beautifully branched.

The fruit is of that kind called a Drupa, and is ripe towards the end of May. It is of an oval shape, is black, smooth, and shining. The pulp is fleshy and soft; the taste a nauseous sweet. The nut is flattened, and on one side winged. The kernel is small, flat, and tastes sweet.

The natural number of these drupæ is five on each common receptacle; but, for the most part, there are only two or three; the rest abort by various accidents.

The roots are thick, and run superficially under the surface of the ground to a considerable distance. The bark is rough, scaly, and warted. The inside, when fresh, is a full yellow, but when dry paler. It has but little smell. The taste is bitter, but not very disagreeable. This is the true *Cortex simarubæ* of the shops.

This tree is known in Jamaica by the names of Mountain Damson, Bitter Damson, and Stave Wood. The shops are supplied with this bark from Guiana; but now we may have it from our own islands at a moderate expence.

On examining the fructification, I found this tree to be a species of Quassia. Under that name I sent it to Europe, and LINNÆUS adopted it into his system.

There are male flowers on one tree and female flowers on another; and this is invariably the case in Jamaica.

Sensible Qualities of Cortex Simarubæ.

I can discover no astringency in the Cortex simarubæ, either by the taste or by the various tests to which I subjected it. Nor is there any mucilaginous quality to be perceived in the recent bark, or in the decoction of that which has been dried.

Its Medicinal Virtues in General.

Most authors who have written on the Simaruba, agree that in fluxes it restores the lost tone of the intestines, allays their spasmodic motions, promotes the secretions by urine and perspiration, removes that lowness of spirits attending dysenteries, and disposes the patient to sleep; the gripes and tenesmus are taken off, and the stools are changed to their

natural colour and consistence. In a moderate dose, it occasions no disturbance or uneasiness; but in large doses it produces sickness at stomach and vomiting. Negroes are less affected by it than white people.

Preparation of Simaruba Bark.

The simaruba bark yields its qualities to water, either in cold infusion or in decoction. I prefer the latter. Physicians have prescribed the bark in different quantities; but it seems now agreed that the following proportion is the best:

Two drachms simaruba bark, boiled from twenty-four ounces of water to twelve ounces, then strained.

This is divided into three equal parts, and the whole taken in twenty-four hours.

When the stomach is reconciled to it, three drachms may be boiled in the same quantity of water, and taken as above mentioned. Some join aromatics to the decoction of this bark, others give a few drops of laudanum with each dose. The decoction is to be drank daily till the disorder is cured, which sometimes happens in a few days, and at other times it may require weeks to perfect a cure.

Of the effects of Simaruba in particular Diseases.

Having thus treated of the simaruba in general, I am now to mention its use and effects more particularly in different diseases, and first in the dysentery. In the years 1718 and 1723, an epidemic flux prevailed in France, and swept off a great number of people of all ages and of both sexes. This disorder not only resisted all the medicines given, but was aggravated by small doses of ipecacuanha, the mildest purgatives, and all astringents. The disorder was happily cured by the simaruba.

M. Jussieu used this bark for fifteen years in obstinate dysenteries with great success: and continued its exhibition, although the catamenia in women, or hemorrhage from piles in men, occurred during the cure.

Modern physicians have found from experience, that this medicine is only successful in the third stage of dysentery, where there is no fever, where, too, the stomach is no way hurt, and where the gripes and tenesmus are only continued by a weakness of the bowels. In such cases, Dr D. Monro gave two or three ounces of the decoction every five or six hours, with four or five drops of laudanum, and found it a very useful remedy.

The late Sir John Pringle, Dr Huck Saunders, and many others, prescribed the cortex simaruba in old and obstinate dysenteries and diarrhœas, especially those brought from warm climates. Fluxes of this sort, which were brought home from the sieges of Martinico and the Havannah, were completely and speedily cured by this bark. The urine, which in those cases had been high coloured and scanty, was now voided in great abundance, and perspiration restored. Dr James Lind, at Haslar Hospital, says, that the simaruba produced these effects sooner, and more certainly, when given in such quantity as to nauseate the stomach. Dr Huck Saunders remarks, that if the simaruba did not give relief in three days, he expected little benefit from its farther use; but others have found it efficacious in fluxes, after a continued use for several weeks. Authors have cautioned us against the use of this bark, where the intestines are ulcerated, and disposed to cancer after fluxes.

In diarrhœas from absorption of pus, the simaruba has given relief; the former discharge from such ulcers was restored, and the pus meliorated.

Lienteria itself, and even hepatic fluxes, have been cured by the simaruba, after other medicines were tried without success. Vide Act. Natur. Curios. tom. ii. p. 80–82.

In putrid fevers, as we are told, attended with coldness of the extremities, colliquative sweats and stools, and great dejection of spirits, this bark performed wonders, and many recovered by its use. Vide Roupe de Morbis Navigantium, p. 311.

Habitual colics, with bloody stools, attended with fever and delirium, have been radically cured by the simaruba bark.

Immoderate fluxes of the menses and from piles, have been happily stopped by this medicine; and it would appear, from some late trials, that fluor albus has been remedied by the same bark.

De Haen found the simaruba to be an excellent vermifuge, and used it with success in diseases depending on worms, particularly fluxes.

My own experience, and that of many living friends, are convincing proofs to me of the efficacy of this medicine; and I hope the simaruba bark will soon be in more general use.

QUASSIA SIMARUBA.

Flos masculus.

Cal. Perianthium monophyllum, parvum, quinquefidum, denticulis ovatis, erectis.

Cor. Petala quinque, sessilia, æqualia, lanceolata, subrevoluta, calyce triplo longiora, calyci inserta. *Nectarium* ex squamis decem ovatis, villosis basi filamentorum interiori insertis.

Stam. Filamenta decem, filiformia, æqualia, longitudine corollæ. *Antheræ* oblongæ, incumbentes; in centro floris corpus carnosum, orbiculatum, decem sulcatum.

Pistillum nullum.

Flos femineus.

Calyx et *Corolla* ut in flore masculo.

Pistillum. Germina quinque subrotunda, introrsum coalita. *Stylus* cylindraceus, erectus, quinque partitus longitudine corollæ. *Stigmata* subulata, recurvata, persistentia.

Pericarpium. Drupæ quinque laterales, distantes, receptaculo orbiculato, carnoso insertæ.

Semina. Nux oblongo-ovata, acuminata, unilocularis. *Nucleus* compressus.

Inflorescentia.

Panicula composita. Pedicellis subjicitur stipula lanceolata petiolata. Folia alternato-pinnata. Foliola oblonga, obtusa, nitida, integra, basi attenuata, subsessilia, costis lateralibus nervosis.

ON THE

POTATO.

[This paper appeared originally in the Communications to the Board of Agriculture. It was afterwards reprinted, London, 8vo. 1795, in the Report of the Committee appointed by the Board, to extract information from the County Reports concerning the Culture and Use of Potatoes.]

Solanum tuberosum, L.—*Common Potato.*

History.—The potato is a native of America, and was well known to the Indians, long before the conquest of Mexico and Peru. Gomara, in his General History of the Indies, and Josephus Acosta, are amongst the early Spanish writers who have mentioned the potato by the Indian names, *Openanch*, *pape* and *papas*. Clusius, and after him Gerard, gave figures of the potato plant. Gerard was the first author who gave it the name Solanum tuberosum, which Linnæus and his followers adopted.

In 1584, Sir Walter Raleigh, so celebrated for his worth, his valour, and his misfortunes, discovered that part of America called Norembega, and by him named Virginia. Whether the Admiral was acquainted with the potato in his first voyage, or whether it was sent to him by Sir Thomas Grenville, or Mr Lane, the first Governor of Virginia, is

uncertain. It is probable he was possessed of this root about the year 1586. He is said to have given it to his gardener in Ireland, as a fine fruit from America, which he desired him to plant in his kitchen-garden in the spring. In August the plant flowered, and in September produced a fruit, but so different to the gardener's expectation, that, in an ill humour, he carried the potato-apple to his master, "Is this" (said he), "the fine fruit from America you prized so highly?" Sir WALTER either was or pretended to be ignorant of the matter, and told the gardener, since that was the case, to dig up the weed, and throw it away. The gardener soon returned with a good parcel of potatoes.

GERARD, an old English botanist, received seedlings of the potato about the year 1590, and tells us that it grew as kindly in his garden as in its native soil Virginia. The plant was cultivated in the gardens of the nobility and gentry, early in the last century, as a curious exotic, and towards the end of it (1684), it was planted out in the fields, in small patches, in Lancashire: from thence it was gradually propagated all over the kingdom, as well as in France.

In 1683, SUTHERLAND has the Solanum tuberosum in his Hortus Medicus Edinburgensis; and it is probable that many others in Scotland cultivated the potato in their gardens about that time. It was not, however, cultivated in open fields in Scotland till the year 1728, when THOMAS PRENTICE, a day-labourer, first cultivated potatoes at Kilsyth. The success was such, that every farmer and cottager followed his example, and for many years past it has become a staple article. THOMAS PRENTICE, by his industry, had saved L. 200 Sterling, which he sunk for double interest: upon this he subsisted for many years, and died at Edinburgh in 1792, aged 86 years.

Culture.—After the number of able reports to the Society of Agriculture, and the notices in many of the statistical

accounts from the clergy in Scotland, nothing scarcely new can be said on the subject. I need only remark, that this exotic thrives as well in Europe as it does in America. In this island particularly, it is quite at home, and there is hardly a soil, but, with a little pains, may be made to produce the potato. In dry seasons, when the crop of corn falls short, the potato is most abundant *. The potato may be cultivated in every habitable part of the globe, but with various success. The heat of the West Indies is too great for it, but in Jamaica and other mountainous islands, where they have all climates, I have seen the potato in great perfection.

Use.—On account of the potato being a species of Solanum or Nightshade, there were many who were prejudiced against it, alleging that it was narcotic. In Burgandy, we find the culture and use of potatoes in food, interdicted as a poisonous and mischievous root; amongst other effects, it was accused of occasioning leprosy and dysentery. Potatoes exposed to the sun and weather for a few days, acquire a green colour, a bitter taste, and a narcotic quality. In this state they are not fit for eating. But there is not the smallest foundation for the other allegations. Prejudice and ignorance have long yielded to experience and truth, and all mankind at this day agree that there is no food more wholesome, more easily procured, or less expensive, than the potato. It constitutes the chief article of food to vast numbers of people, and may be converted to the support of all domestic animals and poultry, whether raw, boiled, or roasted.

Potato-Flour.—In the simple analysis of the potato, we find it is composed of three distinct and essential principles, 1st, A mucilaginous juice, which has no peculiar properties. 2dly, A fibrous light and grey coloured matter, like that contained

* This is not generally the case.

in the roots of many pot-herbs. 3dly, A dry powder, resembling starch from grain.

To obtain this powder, the process is easy. The fresh potatoes must be washed clean, and grated, into a clean vessel. This pulp is next put into a hair-sieve, and mixed with cold water, when, by repeated affusions of water, the strainings are no longer white or milky; what remains in the search may be put to one side. The strained liquor is suffered to settle, and the brown coloured water drained off, and thrown away. Repeated quantities of cold water are poured on the white hard mass, it is well stirred up each time, and when settled, the water is poured off, till the sediment is perfectly white. This matter is taken out, the lumps broken down, and put upon paper to dry. If the potato is ground by means of a wheel-grater or cylinder, shod with a grater, the process will be shortened. A hopper may be adapted to one side of the grater, in such a manner as to assist in rubbing down the potato, without putting to the hand.

This powder of the potato is obtained in different proportions, according to the goodness of the potato itself. At an average, two ounces of the powder may be got from one pound of potatoes.

Potato-flour or powder thus made, is no way different from starch made from grain, and it answers many purposes in domestic economy. Bowens's sago-powder is no other than the starch of potatoes, as the tapioca from Brazil is the starch of cassada. These articles are sold in the shops at an advanced price; and as the sago-powder was laid in by Government for the sick in ships of war, it may be now made in any quantity, and at a trifling expence.

Potato-flour makes all sorts of pastry of a superior quality to common wheat-flour; and, if mixed with sweet-milk, eggs, and sugar, in due proportions, makes excellent custards or puddings. About two years ago, Lord Dundonald had loaf-bread and biscuit baked, from equal parts of common

flour and potato-powder, but the bread was heavy, never rose well, soon grew extremely hard, and was too expensive.

Bread of Potatoes, &c.—For the space of half a century at least, bread has been made in Jamaica from the several sorts of yams, eddoes, and cassada; the two former by means of leaven, the latter with water, like oat-cakes.

In Great Britain, where malt is brewed into ale or beer, yeast is preferable to leaven for baking bread. The most mealy potatoes are to be chosen; when boiled and peeled they are beaten and rolled smooth on a table, with a rolling-pin, then kneaded with an equal quantity of wheat-flour, with a sufficiency of yeast, water, and salt. This bakers call spunge. The dough is set for a night in a warm place, and by next morning (if the yeast is good), it will have risen, and is ready to be made into loaves, rolls, &c.

Boiled yams or eddoes being reduced into a dough, are mixed with an equal weight of common flour, a little prepared leaven, and a sufficient quantity of salt, all well kneaded together. After some hours standing to ferment, the dough is divided into rolls or loaves, and baked in the usual manner, in an oven.

This bread is much lighter and sweeter than flour-bread, and keeps moist for many days. All will depend on kneading the dough well, and keeping it long enough in the oven, till it is thoroughly baked.

Yeast.—This article at times is very scarce in this city. To increase its quantity is an object of importance to the bakers of bread. Several bakers of my acquaintance have taken the hint from me, and now are no way at a loss for yeast. Potatoes boiled and skimmed are put into a sufficient quantity of water, and boiled over a slow fire, till the whole becomes smooth, and of the consistence of pap. To two English gallons of this an English quart of good yeast is

added. The vessel is set in a warm place, for twelve or sixteen hours, when the whole becomes yeast of a good quality, and fit for the purposes of the baker, as well as the brewer.

Biscuit of Potatoes.—To equal quantities of potato-pulp and wheat-flour, add a very little yeast, diluted with hot water, and for every pound a drachm of 60 grains salt. Knead the whole into a firm dough, and bake into biscuits of the usual size. They must be long kept in the oven till their moisture is exhaled, and, after some days' exposure to dry, will keep for many months.

N. B.—If potato-powder is used instead of common flour, the bread is proportionally improved in quality and whiteness.

ON THE

ANTISEPTIC VIRTUES OF

VEGETABLE ACID AND MARINE SALT COMBINED,

IN VARIOUS DISORDERS ACCOMPANIED WITH PUTRIDITY.

[Communicated in a Letter to JOHN MORGAN, M. D., F. R. S. and Professor of the Theory and Practice of Physic at Philadelphia.*]

HAVING experienced the virtues of vegetable acid and marine salt when combined, I beg leave to lay before you a few observations on the use of this simple medicine in several diseases. It is my sincere wish that it may prove as beneficial to mankind in general, as it has been to many of my patients in this part of the country †.

Take of lime-juice or lemon-juice three ounces, of marine salt as much as the acid will dissolve; of any simple distilled cordial water one pint; and of loaf sugar a sufficient quantity to sweeten it. The dose of this mixture must be proportioned to the age, sex, and violence of the disease. A wine-glassful may be given to adults every two, four, or six hours.

By GEOFFROY's table, it appears that the fossil alkali has a greater affinity with the marine than with the vegetable acid. However, marine salt dissolves readily in the lime-juice, throws

* At the date of this communication the author resided in the Island of Jamaica.

† This paper was originally published in the Transactions of the American Philosophical Society, Philadelphia, vol. ii. p. 284. It was afterwards reprinted in the Medical Commentaries for the year 1786. Edinburgh, 1787, p. 189.

up a white scum to the surface, and on applying the ear near the vessel where the experiment is made, a slight hissing may be heard, similar to that when acids and alkalies are mixed. It would seem probable that part of the marine salt is hereby decomposed.

That vegetable acids and marine salt are antiseptics, has long been known; but their effects, when mixed, I apprehend to be but lately discovered.

Without farther preface, I shall proceed to the particular diseases in which they have been administered, prepared as above.

Of the Dysentery.—The dysentery is a very frequent disorder in this and other West India Islands; and sometimes is epidemic, particularly in the rainy seasons, or when provisions are scarce. Amongst other causes of dysenteries, I have often known the eating of yams not arrived at maturity, as also unripe alligator pears, produce a bloody flux.

Dysenteries commonly begin with frequent loose stools for a day or two, attended with gripings; by degrees, the gripes grow more severe; nothing is voided by stool but a small quantity of mucus mixed with blood; tenesmus comes on, and is exceedingly troublesome.

The appetite fails, the patients are low spirited, and suffer a great prostration of strength. The mouth and tongue are much furred and slimy, and the taste is like that of rotten butcher's meat. The desire of drink is sometimes excessive, but for the most part very moderate. The pulse is very low, feeble and undulating, and rarely rises so high as to indicate the use of a lancet. Such was the dysentery in 1771. It proved fatal to many people, both old and young, though treated according to the most approved methods of cure, and the loss of several patients of mine convinced me of the necessity of using antiseptics early in this disease.

A vomit seemed necessary to clear the stomach, and some

gentle purge, to carry off part of the offending matter by stool. But the action of these, however mild, often increased the prostration of strength, and rendered the stools sooner bloody. Nor was opium of any real use. A tea made of Simarouba, and given to some, had a very salutary effect, whilst, if given to others, it would by no means lie on their stomachs.

From a consideration of the antiseptic quality of both the sal marin, and of the vegetable acid, I was induced to make trial of their effects, united in the manner above mentioned. It acted like a charm, and I find that, from the use of it, the frequency of stools, gripes and tenesmus, have soon worn off. The stools gradually become of a natural consistence and quantity; the spirits, strength and appetite returned, and the patient has been restored to perfect health in a very few days.

When the dysentery was of long standing, starch clysters, with a small portion of opium, abated the tenesmus.

This medicine was equally serviceable in diarrhœas.

Diabetes.—As I had succeeded so well in the cure of dysenteries, I was determined to try its effects in the diabetes: several opportunities soon offered; but as these cases were accompanied with other complaints, especially with fevers of the remitting kind, it will be proper first to speak of

The Remittent Fever.

This, by far the most common fever within the tropics, is the least understood, and consequently, for the most part, badly treated. Strangers who walk much, or work hard in the heat of the sun, are more subject to it than seasoned Europeans or natives of the country.

Dr Cleghorn's description of this fever is accurate and just—his method of cure simple and easy. Every physician who would wish to practise with success, should be well ac-

quainted with that valuable performance, as also with what Dr Lind has said on the subject.

It is, then, sufficient here to observe, that remittent fevers are often attended with diarrhœas, the diabetes, and sometimes with a copious discharge of saliva, as if mercury had been previously given. In such circumstances, I never found the bark of service; a few glasses of the above mixture fully answered the intention, not only by removing these symptoms, but the fever at the same time.

The Peruvian bark, afterwards, taken out of some of the same mixture, effectually secured the patient from a return of this dangerous malady.

The mixture rarely acted as an astringent in this or any other disorder. But when this effect took place, the interposition of some lenient purge was deemed necessary.

Belly-Ache.

The belly-ache, with inflammatory symptoms, has frequently occurred in the course of my practice. They yielded with difficulty to bleeding, small doses of emetic tartar, a mercurial pill, repeated doses of castor oil, diluting drinks with nitre, fomentations and clysters. A copious discharge of fœtid excrement, for the most part, gives immediate relief.

I have observed, in many cases, after most excruciating belly-aches, that the stools were liquid, white, small in quantity, and very fœtid. The patients being worn out with pain, grew despondent, did not care to speak, fell into cold clammy sweats, and were very restless. They complained of an ill taste in their mouths; their tongues were much furred; their breath offensive, and they had a great propensity to vomit.

Formerly I attempted the relief of those threatening symp-

toms with the bark, in various forms, as well as claret, and often saved my patients; sometimes, however, I failed of success. When such cases fall now under my care, I have immediate recourse to the antiseptic mixture, nor have I been hitherto disappointed; the stools becoming less frequent on the use of it, and of a better consistence; the cold sweats also disappear, and the spirits soon return, together with an appetite for food.

The Putrid Sore-Throat.

In June 1770, the putrid sore throat made considerable havock amongst adults and children. It attacked those of a lax habit, who for a few days had slight headaches, chilliness and heats alternately, and an uneasiness about their throats, but not so much as to hinder their swallowing.

On examination, the mouth, tongue, and gums, were foul and slimy; the tonsils and uvula covered with white specks or sloughs; the breath was hot and offensive, the skin felt hot and pungent to the touch; the pulse low and quick; a diarrhœa often attended, and the patients were in general much dejected.

Antimonial wine, with cordials and nourishing diet, succeeded best, till the sloughs or spots were removed and separated; then the bark completed the cure. When a diarrhœa accompanied this disorder, I gave the mixture with success.

In all disorders where a gargle is necessary, I make use of the above mixture in preference to any other, and I find it speedily cleanses the tongue, gums, and fauces, and sweetens the breath.

Where lemons or limes cannot be had, vinegar or cream of tartar may be substituted in their room.

From what has been said, it is evident that the medicine is possessed of considerable antiseptic powers, and its virtue consists in correcting the peccant matter in the stomach and intestinal canal.

All the diseases in which I have given it had a putrid tendency. I shall be happy to hear of its success in your western hemisphere.

I am, with esteem, Sir,

Your most humble servant,

WILLIAM WRIGHT.

The foregoing is an exact reprint of the original paper, as it appeared in the second volume of the Philosophical Transactions of Philadelphia. From the distance of Dr WRIGHT's residence, at the period of its publication, and from the verbal inaccuracies with which it is chargeable, he had probably no opportunity of revising it as it passed through the press: but, as it has repeatedly appeared in print, the Editor is restrained, by the rule he has adapted, of leaving the papers which had been published in the author's lifetime entirely untouched.

HISTORY

OF AN

OBSTRUCTION OF THE RECTUM AT BIRTH,

SUCCESSFULLY CURED BY OPERATION.

[Communicated to Dr Hope, and first Published in the Medical and Philosophical Commentaries, Vol. iii. p. 419, London 1775.]

On the 18th of August 1773, I was sent for to see a new-born child at Bountyhall estate, belonging to John Simpson, Esq. The child was a Negro boy, born the preceding day. The midwife had given it repeated doses of castor oil, and finding that no meconium, or any other feculent matter, was discharged, she tried to give it a clyster; but, upon finding that the ivory pipe could only be introduced about a quarter of an inch, she desisted from the attempt. When I came to examine it, I found a firm resistance to a probe, and could plainly discover, with my finger and thumb, a hard tumour of a round form, nearly as large as a walnut. I concluded this to be a callosity of the rectum; and although I had never heard of the success of an operation in a similar case, I told the Negro parents and the proprietor that the child had no other chance for life, but by an opening being made through this obstruction. This was readily agreed to, and I called to my assistance Mr Thomas Steel, an eminent surgeon. He being fully satisfied of the propriety of this hazardous attempt, we accordingly proceeded to the operation.

The child was held in a horizontal posture, with his knees drawn up towards his belly. I first enlarged the external orifice,

by cutting through the constrictor ani. My assistant then held the tumour fast, and in the position in which it naturally was. I introduced a directory to the middle and most prominent part of the tumour, and, with a common lancet, I made an incision quite through the resistance, in the direction of the rectum. We had the pleasure of immediately seeing a large quantity of meconium come away, and there was at the same time a considerable discharge of wind. The child's belly, which before was very hard, and much swelled, soon subsided; the symptomatic fever abated, and a subsultus tendinum, which had accompanied it, entirely disappeared. A clyster of milk and sugar was then thrown up, which brought away a considerable quantity of meconium and excrement.

From this operation the child's most urgent complaints seemed to be removed. But we were farther informed, that, from the time of its birth, it had discharged no urine. Upon examination, we discovered that the prepuce was imperforated. The child was directly circumcised, and the urine then flowed in abundance. We contented ourselves by dressing, at that time, with a soft roll or dossil of lint, and a poultice externally; and we directed that these, with fomentation to the part, should be used twice a day.

By the 25th of the month, the tumour in the rectum had entirely collapsed; but the train of threatening symptoms with which the child had before been affected again made their appearance, and upon examination we found that the parts before divided were again united. In this situation we had recourse to the lancet a second time, and not only made a thorough perforation, but extended the incision quite through the sides of the callosity. In other respects we proceeded as at first. After this, nothing remarkable occurred in the cure, which was completed in five weeks, and my patient is now a stout healthy boy.

ON THE

USE OF COLD BATHING

IN THE

LOCKED JAW.

[Communicated in a Letter to JOHN FOTHERGILL, M. D. F. R. S. and first published in the Medical Observations and Enquiries, Vol. vi. p. 143. London 1784.]

SIR, *Edinburgh, 20th January* 1779.

I have sent you several cases of the Tetanus and Opisthotonos, which were successfully treated by the external application of cold water. Since I used this method, I never failed, in one instance, to effect a cure; and that in a shorter time than by any other method hitherto proposed.

I have stated facts as they occurred, in those cases under my own observation, or from the accounts of gentlemen to whom I communicated my remarks. Truth and honour, in practitioners, only can give lustre and excellence to the science of physic.

And now, having fulfilled my engagements to you, and your worthy friends of the Medical Society of London, I hope, by your means, these papers will be given to the public soon: and am, with great respect,

SIR,

Your most humble servant,

W. WRIGHT.

Case I.—*June* 7. 1776.—A Negro boy, twelve years of age, (belonging to John Simpson, Esq. in the parish of Trelawny, Jamaica) who was employed in looking after cattle, had, at eleven o'clock before noon, a stroke of the sun. He was soon afterwards taken up speechless, and carried home to the estate, where he lay insensible, and at times much convulsed. He was bled, and well rubbed with camphorated spirits; volatiles were often applied to his nostrils, and a stimulating clyster thrown up. But as the boy could swallow nothing, Mr Patrick Irving, an experienced surgeon, was sent for, who declared the case to be a locked jaw; and ordered twenty drops of laudanum to be given him every two hours. His attendants forced him to take the medicine regularly, as also some sage tea, and now and then a little gruel. He had but an indifferent night, and the laudanum was directed to be continued the following day and night. But as no benefit was received from that, or any other means made use of, I was desired to visit him on the 10th of June, and the third day of his illness, at three in the afternoon.

He was seized with strong spasms every quarter of an hour. During the fit, his body was bent backwards like a bow, and he rested on his heels and head; at such times his jaws were closely shut; but when the spasm ceased, his jaws could be opened so as to admit a spoon. He swallowed liquids with difficulty; and the attempt generally brought on a fit sooner than it would otherwise have happened: his skin was warm, his pulse quick and small. He took no food, but what had been forced into him; and when a stool was supposed necessary, it was procured by an emollient clyster.

The case clearly appeared to be an *opisthotonos*, joined with a *tetanus*. The frequency and violence of the spasms portended danger, and there seemed to be a necessity for some speedy method of relief.

My worthy friend Dr Lind, physician to the royal hospital at Hazlar, first hinted to me the use of cold water in spas-

modic affections. Here, then, was a fair opportunity, and Mr Irving readily agreed to put it in practice.

The boy was stripped naked, and carried out into the open air: his body and limbs were so stiff, that it was with some difficulty we could place him in a sitting posture. Two large pails of cold water were forcibly thrown on him at the same time. The shock from the water made him start on his feet, he recovered his senses in a great measure, and seemed surprised at what was done to him. After being rubbed with a dry cloth, a loose frock was put on, and a kindly glowing heat succeeded. By the help of a person, he walked about for a little while, and was then suffered to lie down. His jaws already were greatly relaxed, and he swallowed some broth. I ordered him to lie in a cool airy place; that he should be covered with a single sheet, and that the cold water should be thrown on him once in four hours.

June 11.—He slept a good deal in the night; the spasms less frequent, and much weaker than before. His senses are returned; he asked for drink, and took some nourishment. He complains of a stiffness in his neck and jaws, and now and then of a violent pain in his stomach.

I directed the cold bath every three hours, in the day time.

June 12.—He had a tolerable good night, his jaws much freer. The pains in his neck, jaws, and stomach, greatly abated; he takes food seemingly with an appetite, and had a natural stool. The cold water was thrown on him three times this day.

June 13.—The spasms entirely gone; the uneasiness in his jaws, &c. so trifling that my attendance was no farther necessary. The cold water was used twice a-day, and by the sixteenth the cure was completed.

Case II.—On the 17th of March 1777, I was sent for to visit a Negro man, at Rosehall estate in St James's, the property of the Honourable John Palmer, Esq.

The Negro was named Frank, aged about 22 years; was of a slender make, but for the most part healthy. Ten days before I saw him, on account of some misdemeanour, his father gave him a severe beating with a stick, and particularly bruised his cheeks and temples. From that time he continued to be much indisposed; a surgeon in the neighbourhood was sent for, who, mistaking his disorder for a sore throat, made use of bleeding, blisters, laxatives, and gargles; but the disorder daily increasing, and the patient complaining much of his neck, and a stiffness of his jaws, a locked jaw at length was suspected. Thirty drops of laudanum were ordered to be given him every four hours; he was directed to lie in bed, to be covered with blankets, and to promote sweating by warm teas and gruels: all this, however, without effect.

The symptoms were as follows: viz. an acute pain under the sternum, darting through to the small of the back; a pain and stiffness in the neck and jaws; every fifteen minutes he was attacked with a spasm, which greatly aggravated the pains and rigidity, and bent his head and shoulders backwards. The fit lasted ten minutes, and when it was over he sweated profusely. The jaw now gradually loosened so much that I could see his tongue, which was most miserably torn. On account of this, and the difficulty of swallowing for the last six days, he had taken very little sustenance.

When he stood up, his head was much retracted, nor could he turn it to either side; his body bent a little backwards, and the lower extremities quite rigid.

These appearances, and the little benefit he had from every method hitherto tried, determined me to use the cold bath. I therefore got him out of bed, and, after being gradually cooled, he was helped out into the open air, his shirt was taken off, and, as he could not sit down, he was laid on the ground, with his face downwards. Three buckets of cold water were at once thrown upon him, from a considerable height. The effect of this was a glow all over his body; he felt less

pain and rigidity, he could open his mouth more than before; and although he could scarce stand or move before this, he now, by the help of a stick, walked several yards alone. I directed the cold water to be thrown on him every three hours, in the day time; that his food and drink should be cold, and when in bed to be lightly covered. The pain in the pit of his stomach was the most troublesome complaint, for which I gave him two grains of solid opium at bedtime.

March 8.—Rested better last night than any since his being taken ill. His mother thought it cold a little before day, and covered him with bed-clothes; she gave him also his water-gruel warm: by these means he had several smart attacks of the spasms, before eight o'clock in the morning, when I visited him. His mother was convinced of her error, and promised in future to observe my directions. The cold water was applied every two hours, through the day, and the opiate repeated at bedtime as before.

March 9.—Slept most part of the night; the few returns of the fits were slight, and he extends his jaws more than before; he has less difficulty in swallowing food. As he was costive, I ordered an injection of warm water and castor-oil,—and that he should take a large wine-glassful of the following decoction every three hours: that the cold water should be thrown on him four times a-day, and that the opiate should be omitted.

℞ Cinchonæ Jamaicensis * ℥ss. coque ex aq. fontan. lib. iij.; ad dimidium adde Gum Assafœtid. ℥ iij.; f. solutio, et cola.

March 10.—Rested well in the night; had only a slight attack of the spasm this morning, and finds the stiffness and pains greatly abated; he takes food every now and then, and had a stool in the night. As some difficulties happened in getting people to throw the cold water upon him, he re-

* Vide Phil. Trans. vol. lxvii. p. 504.

quested to be led to the back waterfall, which was distant about 100 yards. Under this he sat down; after ten minutes his mother advised him to get up, but he felt such ease from the water, that he staid full half an hour; he then got up, and walked back without assistance. In the afternoon, he again sat under the fall of water for half an hour; he took nourishment pretty freely; and, as I found he had used but little of the decoction, I ordered a few glasses of claret.

March 11.—No attack of spasm these last twenty-four hours; he sat twice this day under the waterfall for a quarter of an hour at a time; he took several glasses of the bark-decoction above mentioned, and also some claret.

March 12.—This morning saw my patient walking up from the sea-side; he told me that he had sat down in the water for a good while, so as to let the surf of the sea beat on his back, by which he thought himself much benefited; his jaws now were at full liberty, he ate and drank heartily, and took the decoction every four hours.

I recommended going into the sea twice a-day, which completed the cure by the 15th. I saw him six miles distant from Rosehall, at work, and in good health, the beginning of May.

Case III.—*April* 4. 1777.—Having occasion to be in the parish of Westmoreland, my advice was requested for a Negro man, belonging to Mr George Mowatt, merchant at Savanna-la-Mar.

This man, aged about thirty, was tall, strongly made, and till now, enjoyed an uninterrupted state of good health; he was employed as a labourer on a wharf. The weather at this time was uncommonly warm; and unless this circumstance occasioned his illness, he could assign no other cause whatever. He was taken suddenly with the disorder three days before I saw him. His complaints were a pain under the cartilago ensiformis,—his jaws close locked, and a stiffness of

the extremities. The spasms returned every ten minutes, and were very severe. The surgeon who attended him, on account of his full habit, bled him pretty freely, gave him a cooling purge, and caused him to be well rubbed with a volatile liniment: he ordered him to be kept warm with flannels, and supplied with plenty of warm diluting drinks.

Several ingenious gentlemen of the faculty were present, to whom I communicated the success I had in the external application of cold water in similar circumstances. They agreed to have it tried in this case, every four hours in the day-time; and at bedtime, to give him thirty drops of laudanum; and that he should lie in a cool airy place, with little covering. This method was pursued for three days, which entirely removed the disease.

In July, the surgeon told me that a few days after the locked jaw left the Negro, he was seized with an acute rheumatism, which, however, soon gave way to bleeding, laxatives, and small doses of emetic tartar.

Case IV.—*June* 10. 1777.—A Negro man, aged about twenty-five years, belonging to Mr Burke at Rosegreen, had the misfortune of a rusty nail running through the sole of his foot. The nail was immediately extracted, a fomentation and poultice was applied round the foot, and a dose of salts given him next morning.

He had no ailment till the third day after the accident, when he complained of a pain in the pit of his stomach, and a stiffness of his jaws, so as to prevent his eating any solid food. Mr Patrick Irving was called to his assistance: he dilated the external wound made by the nail, and repeated the fomentation and poultice: attention being paid to the state of his belly, he lost no time in giving opiates, beginning with one grain of extractum thebaicum, and increasing the same to three grains every four hours.

Mr Irving had seen the good effects of cold bathing in

the preceding cases; and, as no mitigation of the disorder was likely to be brought about by the means already used, he resolved to try the cold water. Mr IRVING treated him in much the same way as mentioned in the first case, and with such success, that in four days all his complaints left him. He took the bark, the injured parts suppurated kindly, and the man soon recovered.

CASE V.—*July* 3. 1777.—A Negro woman, aged fifty-seven, belonging to Rose Hall estate, after sleeping, exposed to the cold air in the night, was soon afterwards seized with symptoms of the opisthotonos and locked jaw. The woman of late years had been sickly, and was much emaciated. Mr PATRICK IRVING attended her, and treated this case by the cold bath; after which, by cool free air, a liberal use of claret, and a decoction of bark and assafœtida, she got rid of the most urgent symptoms in a week's time, and soon afterwards was dismissed cured.

CASE VI.—On the 14th of September I received a letter from JOHN DRUMMOND, Esq. (who practises physic with great repute in Westmoreland), dated June 21. 1778. He is a gentleman with whose merit I am well acquainted, and whose veracity I can fully depend upon. I shall, therefore, give you the history in his own words:

"*A History of a Locked Jaw successfully treated by* Messrs DRUMMOND and BEWEASTLE, *in Westmoreland, Jamaica.*

"A stout made squat Negro fellow, aged about forty, had been healthy from his youth, till about three years ago, when he was attacked with the coccobia, or joint-evil *, which baffled all the art of medicine. It produced its usual and dire-

* See HILLARY on the Diseases of Barbadoes, p. 335.

ful effects of destroying the fingers and toes; and rendered him of no other service on the estate, except as a watchman, which was the duty allotted him for some years past.

In February 1778, his disease broke out with uncommon violence in the right foot, and seized the metatarsus, with most excruciating pains. The weather at this time was moist and foggy, and his hut was not in good repair: it was also situated in a valley, in the midst of woods and plantain walks, though otherwise in a dry part of the country.

On the 28th of March we were called to his assistance. He complained of a stiffness of his jaws, neck, and spine, with an acute pain striking through from the cartilago ensiformis to the spine, which at times threw him backwards into violent spasms. These returned frequently, and greatly distressed the poor creature. During the spasms he was incapable of swallowing any thing, and, at all times, expressed a sense of great stricture and rigidity in the muscles of deglutition; as often as he attempted to swallow any thing, or to move, the spasms were immediately brought on. He had been in this situation some days before we were sent for.

Speedy assistance seemed absolutely necessary, and we resolved to leave no method untried, that might afford the least prospect of relief. The following course was therefore ordered to be strictly followed, viz.

℞ Op. Thebaic. ʒss divide in Pilul. xij.
Cap. Pilul. unam 2 quaque hora.

We gave directions that he should be well soused, with the coldest water that could be procured, every four hours; and twice a-day to rub his spine with mercurial ointment, made of equal parts of hog's-lard and quicksilver: emollient oily clysters were at proper times injected.

March 29.—He took all the pills as directed, and received great benefit from the cold water; he generally sweated co-

piously after it, and slept much in the intervals. Medicines and cold bath to be continued as before.

March 30.—Much better: the spasms are not so frequent; and he himself remarks not near so violent as before. He speaks distinctly, and swallows better, but complains much of his neck being stiff, and also the hips and lower extremities. The cold bath and medicines continued.

April 2.—Free from all complaints, except the pain in his hip, and a soreness in his mouth. He had in all taken ninety grains of solid opium, and three ounces of strong mercurial ointment were rubbed in. The cold bath, and every medicine, discontinued.

A gentle spitting came on, which lasted a few days; he perfectly recovered of his late alarming disorder, and his foot is now (June 21.) almost well.

I leave you to make your own observations on this case; but, if you attend to the suddenness of relief from the cold bath, you will be led to conclude that the mercury had no share, as it could not so soon act.

I am of opinion that opiates, and the cold bath, will answer every intention in the tetanus, and such like diseases; for, whilst the opium diminishes the irritability, and gives a truce from the violent symptoms, the cold bath produces that wonderful tonic effect, so observable in this and some other cases. Perhaps the bark joined with these would render the cure more certain. May we not, then, have failed in many cases, by using opiates alone in large doses; or what probably is worse, with the warm bath instead of the cold bath? And have we not reason to suspect that the increased doses of opium (that seemed requisite when the warm bath was used), may have proved pernicious?"

J. D.

ACCOUNT

OF A

CHILD WHO HAD THE SMALL-POX IN THE WOMB.

[Communicated to the Royal Society, in a Letter addressed to JOHN HUNTER, Esq. F. R. S. Read 21st May 1781, and first published in the Philosophical Transactions, Vol. lxxi. Part I. p. 372.]

SIR,

I HAVE read with much pleasure and information Mrs FORD's case, which you published in the Philosophical Transactions, vol. lxx, p. 128. From the facts you have adduced, it amounts to a certainty that her fœtus had received the variolous infection in the womb.

This induces me to lay before you a singular case that fell under my care some years ago. I am sorry I cannot be more particular, having unfortunately lost all my books, and my notes of practice of this case, and several others, by the capture of the convoy, on the 9th of last August.

In 1768, the small-pox was so general in Jamaica, that very few people escaped the contagion. About the middle of June, Mr PETERKIN, merchant at Martha Brae, in the parish of Trelawney, got about fifty new Negroes out of a ship. Soon after they landed, several were taken ill of a fever, and the small-pox appeared; the others were immediately inoculated: Amongst the number of those who had the disease in

the natural way, was a woman of about twenty-two years of age, and big with child. The eruptive fever was slight, and the small-pox had appeared before I saw her. They were few, distinct, and large, and she went through the disease with very little trouble, till, on the fourteenth day from the eruption, she was attacked with the fever, which lasted only a few hours. She was, however, the same day taken in labour, and delivered of a female child, with the small-pox on her whole body, head, and extremities. They were distinct and very large, such as they commonly appear on the eighth or ninth day, in favourable cases. The child was small and weakly; she could suck but little; a wet nurse was procured, and every possible care taken of this infant, but she died the third day after she was born. The mother recovered, and is now the property of Alexander Peterkin, Esq. in St James' parish.

In the course of many years' practice in Jamaica, I have remarked that where pregnant women had been seized with the natural small-pox, or been by mistake inoculated, that they generally miscarried in the time of, or soon after, the eruptive fever; but I never saw any signs of small-pox on any of their bodies, except on the child above mentioned. I am, &c.

Southampton-Buildings, Holborn,
February 27. 1781.

ON THE

EXTERNAL USE OF COLD WATER IN THE CURE OF FEVER.

[This paper was originally communicated to the London Medical Society, through the medium of Dr Fothergill. It was read for the first time before the Society, on the 7th of March 1779. It was again read on the 8th of March following, and ordered to be printed in the Society's Transactions. Afterwards, in March 1783, and March 1784, it was read for the third and fourth time, and on each of these occasions, it was resolved to postpone the publication *sine die*. On the second return of Dr Wright from Jamaica, in 1786, the paper was recovered from Dr Thomson, the Secretary to the Medical Society; and, as a communication to Dr Simmons, it was first printed in the London Medical Journal, Vol. vii. Part 2. p. 109.]

From the time that physicians have found fresh air and cold watery drinks so beneficial in the small-pox and malignant fevers, these diseases have been less fatal within the tropics than formerly.

Having often observed how greatly people, labouring under malignant fevers, were refreshed by washing the hands and face in cold water, I was led to think that the cold bath would answer many good purposes in obstinate malignant and putrid fevers; but a practice so new in Jamaica, and so different from the common methods, could not well be proposed; and, if it had, would probably not have been submitted to: on which account, I kept my opinion to myself till

some favourable opportunity; which did not happen till I was on my passage from Jamaica to England.

On the 1st of August 1777, I embarked in a ship bound to Liverpool, and sailed the same evening from Montego Bay. The master told me he had hired several sailors on the same day we took our departure; one of whom had been long at sick quarters on shore, and was now but in a convalescent state.

August 23., we were in the latitude of Bermudas, and had had a heavy gale of wind for three days, when the above-mentioned man relapsed, and had a fever, with symptoms of the greatest malignity. I attended this person often, but could not prevail with him to be removed from a dark and confined situation to a more airy and convenient part of the ship; and as he refused medicines, and even food, he died on the eighth day of his illness.

By my attention to the sick man, I caught the contagion, and began to be indisposed on the 5th of September, and the following is a narrative of my own case, extracted from notes daily marked down. I had been many years in Jamaica, but, except being somewhat relaxed by the climate and fatigue of business, I ailed nothing when I embarked. This circumstance, however, might perhaps dispose me more readily to receive the infection.

September 5th, 6th, 7th, small rigors now and then,—a preternatural heat in the skin,—a dull pain in the forehead, the pulse small and quick,—a loss of appetite, but no sickness at stomach,—the tongue white and slimy,—little or no thirst,—the belly regular,—the urine pale and rather scanty,—in the night restless, with startings and delirium.

September 8th, every symptom aggravated, with pains in the loins and lower limbs, and stiffness in the thighs and hams.

I took a gentle vomit on the second day of this illness, and next morning a decoction of tamarinds; at bed-time, an

opiate, joined with antimonial wine, but this did not procure sleep, or open the pores of the skin. No inflammatory symptoms being present, a drachm of Peruvian bark was taken every hour for six hours successively, and now and then a glass of port-wine, but with no apparent benefit. When upon deck, my pains were greatly mitigated, and the colder the air the better. This circumstance, and the failure of every means I had tried, encouraged me to put in practice on myself, what I had often wished to try on others, in fevers similar to my own.

September 9th, having given the necessary directions, about three o'clock in the afternoon I stripped off all my clothes, and threw a sea-cloak loosely about me till I got upon deck, when the cloak also was laid aside: three bucketsful of cold salt water were then thrown at once on me; the shock was great, but I felt immediate relief. The headache and other pains instantly abated, and a fine glow and diaphoresis succeeded. Towards evening, however, the febrile symptoms threatened a return, and I had recourse again to the same method as before, with the same good effect. I now took food with an appetite, and, for the first time, had a sound night's rest.

September 10th, no fever, but a little uneasiness in the hams and thighs,—used the cold bath twice.

September 11th, every symptom vanished, but, to prevent a relapse, I used the cold bath twice.

Mr Thomas Kirk, a young gentleman, passenger in the same ship, fell sick of a fever on the 9th of August. His symptoms were nearly similar to mine, and, having taken some medicines without experiencing any relief, he was desirous of trying the cold bath, which, with my approbation, he did, on the 11th and 12th of September, and, by this method, was happily restored to health. He lives at this time near Liverpool.

There are a number of testimonies, both ancient and modern, of the cure of putrid and malignant fevers, by admi-

nistering cold water in large quantities, for common drink, and applying cold water externally to the surface of the body.

The Greek physicians extinguish the intense heat of ardent fevers, at their height, by making their patients drink large quantities of cold water, and sometimes plunging them into a cold bath. A copious and critical sweat was always expected to follow this practice.

Dr Cyrillus *, a learned and ingenious physician and professor at Naples, has favoured us with a circumstantial account of the good effects of cold water given internally in malignant fevers at Naples, and observes, that, in obstinate cases, powdered snow was laid on the breasts of the sick. The success of this mode was such, that this practice was universally adopted there, and still continues till the present time.

Dr J. G. de Hahn has given † us the history of a putrid epidemic, which prevailed at Breslaw in 1737, and in which every method of cure was ineffectual, till cold water was applied with sponges to the whole surface of the body. Among other proofs of the efficacy of this mode of treatment, the author mentions its successful use in his own case.

Sir John Chardin, when at Gambroon, in 1673, was seized with a malignant burning fever, attended with delirium and many other bad symptoms; and of which, after having had many medicines prescribed without the desired effect, he was speedily cured by the cold bath.

"This uncommon and surprising practice" (says Dr Glas ‡), "so successfully employed in curing a burning fever, accompanied with weakness, faintness, and prostration of

* Phil. Trans. vol. xxxvi. No. 410.

† Vide Acta Physico-Medica Acad. Nat. Cur. vol. x. p. 3. 4to. Norimbergæ, 1754.

‡ See Dr Glas's first Letter to Dr Baker, p. 37. 8vo. London, 1767.

strength, without any apparent cause, when duly considered, points out a more successful method of treating our putrid, malignant fevers than that which is at present most commonly used."

In the West Indies fevers are less contagious than in this country, because the same causes of contagion do, in general, not exist there; the sick being placed in airy and well-ventilated chambers: but in jails, in crowded hospitals and ships, fevers, in the West Indies, are as infectious as in Europe; of which I have seen many examples within these last four years. The cure, in those cases, was effected by a removal of the sick to better air,—by cleanliness in apparel and bed-clothes,—frequent bathing in the sea for a short time,—cold water alone for drink, or acidulated with elixir of vitriol,—a moderate use of wine,—and the bark.

London,
January 2. 1786.

ON THE

EXTERNAL USE OF COLD WATER IN THE SMALL-POX.

[This Paper, accompanied by the foregoing, was read before the Medical Society in 1779, 1783, and 1784; but, as appears from the following Letter to Dr DUNCAN, was never published till the year 1807, when it appeared in the Medical and Surgical Journal, vol. iv. p. 123.]

Letter to A. DUNCAN jun. M. D.

SIR,

THIS paper, together with that on the external use of cold water in malignant fever, was written in 1769–1770, and sent to Dr JOHN FOTHERGILL, for the Medical Society of London, in the beginning of the year 1779. It was read several times; at first ordered to be printed, afterwards postponed, and laid amongst their archives.

It is probable that they thought this practice so rash and daring, that they would not give their sanction to it.

The Society was soon afterwards dissolved by the death of Dr FOTHERGILL, Dr HUNTER, and Dr SOLANDER; and I, with some difficulty, recovered my papers from Dr THOMSON, secretary to the Society.

Dr SIMMONS published my paper on fever in 1786, but this paper on the small-pox never saw the light.

I sent it, with others, to Dr CURRIE, at Liverpool; it is the same he alludes to in the second volume of his Medical Reports.

I beg leave to present you with this copy, that, if you think proper, you may give it a place in your useful Medical Journal.

EDINBURGH,
15*th September* 1807.

" IN the year 1768, the small-pox was in a manner epidemic in Jamaica; it proved fatal to a number of people who took it in the natural way, but only to a few who were inoculated and properly treated.

" This disease became general about the months of April, May, and June, in the parish of St James's. Such as had the disorder in the natural way, had a load of pustules, and often of the confluent kind. SYDENHAM's cool method of treatment was called to our remembrance, by the success of the Messrs SUTTONS, and of Dr DIMSDALE. But although a liberal use of cold drinks were allowed the sick, little benefit could be expected from cool air, in such a climate and season of the year.

" It is well known, that the quantity and quality of small-pox depends on the *duration and violence* of the eruptive fever;—any expedient, then, to mitigate the one, would of course render the other more favourable.

" The Maroon Negroes * in Jamaica, and some nations on the coast of Guinea, have a custom of plastering the bodies of such of themselves as are taken ill of the small-pox, and especially during the eruptive fever, with *wet clay*, and with such good effects as determined me to try the cold bath.

" So soon as a person was seized with the variolous fever, whether from inoculation or otherwise, I caused an assistant

* " Maroon Negroes.—Soon after the English settled in Jamaica, a number of runaway Negroes assembled in the mountainous places. They became formidable, and committed such ravages and depredations on the white inhabitants, as greatly obstructed the settlement of the country. Governor Trelawny obliged them to capitulate in 1739."

to throw cold water on their naked bodies every four or six hours. The consequence was a truce from the fever, from the headach, and pain in the back; a glow succeeded, with a kindly perspiration. The eruption after this was for the most part favourable.

" In other cases, where the small-pox had made their appearance, and by their quantity, and the continuance of the fever, a confluent pock was apprehended, the cold bath not only abated the fever, but diminished the number of pustules, and the patients went through the disease easier. I do not recollect more than one person out of five hundred, treated in this manner, but what agreed perfectly well with the cold affusion.

" So soon as the eruption was completed, and the fever gone, I desisted from the external application of cold water; I kept my patients in cool air, and allowed them cold water through the whole course of the disease.

" The secondary fever was prevented, or greatly mitigated, by timely purging the patient: and so soon as the pustules were at the height, by discharging the contents by a needle or some sharp pointed instrument *, by the bark, and sometimes epispastics. But where the fever run high, antimonial wine, or James's powder, was given; but in common cooling laxatives, small doses of emetic tartar, with or without opiates, were sufficient; and, lastly, the bark and port-wine."

Extract of a Letter from Dr GAIRDNER, *dated St James's, October* 24. 1778.

" The small-pox made their appearance in this parish, and it became necessary to inoculate the Negroes on Green Park, and Castle Wemyss estates, and also those of the small settlements. The practice was the same as Baron DIMSDALE

* A practice common on the coast of Guinea.

recommends, only during the eruptive fever we used the cold-bath, that is, we dashed cold water on their head and in their faces, which had a remarkable effect in giving immediate ease; it carried off the fever, and no doubt lessened the eruption.

" At Castle Weemyss estate, when the Negroes were feverish, I made them go in below the spout of water. They were so much pleased with its good effects, that they often went below it of their own accord. All of them had the small-pox remarkably easy. One hundred and twenty of them were inoculated without any preparation; they were kept at easy work during the whole time of the disease, and were all able to go to their usual employment in fourteen days after being inoculated.

" The same success did not attend the Negroes on the small settlements, which I think was owing chiefly to their not using the cold bath."

AN

ACCOUNT OF A DROPSY CURED BY BLUE VITRIOL.

[Read before the Medical Society the 9th April 1781, and first published in the London Medical Journal, vol. i. p. 266.]

Stephen Friar, a native of the Island of Madeira, aged about twenty-four years, was steward of a ship, from London to Jamaica. Soon after his arrival at Montego Bay, he was taken ill of a fever, and left ashore at sick-quarters. Captain Mercer of Liverpool offered him a passage, and he was brought on board July 30. 1777, in a very low condition. The account he gave me was as follows:—

That about the beginning of June he was seized with a fever, which, notwithstanding the many medicines given him, did not entirely leave him till about ten days before he embarked. He complained of tightness about the præcordia, and of a difficulty of breathing when he walked. He had pains in his hips and limbs, was sometimes much griped, and once, in three or four days, had a few watery stools, which sensibly diminished his strength. His appetite was tolerable; his urine high coloured, and in small quantity. I ordered him some stomachic bitters, a nourishing diet from the cabin, and to stir about upon deck in fine weather.

August 22d, he complained much of the pain in his stomach, and of a difficulty of breathing when he attempted to walk upon deck. On a supposition that he might have visceral obstructions, I gave him two grains of *merc. dulc.* combined with half a grain of *extract. theb.* at bed-time, two successive nights, by which he was a little relieved, and returned to the use of the bitters.

August 29th, a heavy gale of contrary winds came on, the vessel shipped much water, and our patient being badly lodged, got wet in the night: this occasioned a fever, with headach, thirst, &c. which, however, went off by the use of antimonial wine and laudanum; and he again took the bitters as before.

Sept. 1st. Although this man's appetite was for the most part good, yet, instead of mending, he daily felt himself weaker, the tightness about the præcordia and difficulty of breathing increased, and he appeared bloated in the face. I now observed his legs swelled about the ancles, which retained the impression of my finger for a considerable time. The scrotum was clear and full of water, but no fluctuation could be felt in the abdomen.

I was at a loss whether to ascribe this beginning of dropsy to diseased viscera, or to a general debility of the system. The former opinion prevailed: five grains of calomel, and three grains of *extr. theb.* were made into pills, which being divided into three doses, one dose was taken every night.

Sept. 5th. The swelling in the legs and scrotum rather increased, and there was now an evident fluctuation of water in the abdomen. On searching the medicine box, I at first found nothing that suited my purpose, either as a diuretic or tonic.

During my residence in Jamaica, I had often heard of the success of a nostrum in dropsy, used by a surgeon in Montego Bay. A friend procured me some of the powder, and on ex-

amining it with the microscope, and tasting it, I found it to be composed chiefly of wild cinnamon and Roman vitriol; the latter seeming to be in no small quantity in a dose. Necessity now made me determine to try this doubtful remedy, rather than none at all.

℞ Vitrioli cœrulei, Corticis Winterani occidentalis, utriusque ʒj.; f. pulvis subtilissimis, cui adde, Mucilaginis G. Arabici q. s. ut fiat massa pilularum de qua formentur pilulas xxiv. Capiat j. omni nocte, hora somni.

Sept. 6th. He had been griped a little in the night, and had two watery stools this morning, which probably would have happened whether he had taken any medicine or not. I gave him half a grain of *extr. theb.* with the pill.

Sept. 7th. He passed more urine, and found himself rather easier. He continued to take a pill night and morning, and to repeat the opiate at bed-time.

Sept. 9th. During the last two days he passed abundance of urine, and had two loose stools a-day. The size of the abdomen, scrotum, and legs, greatly diminished. He walked upon deck with greater freedom, and his keen appetite was gratified with whatever the cabin afforded. Since he began the use of this medicine, he was directed to drink as often as he felt himself thirsty.

Sept. 12th. The weather being stormy, he omitted his pill at bed-time, and had four watery stools in the night, which fatigued him a little. The swellings were entirely gone. He had some mutton-broth for dinner, and several glasses of mulled port-wine through the day; at bed-time the pill and opiate were repeated.

Sept. 15th. The weather continuing bad, he had no medicine after the 12th, but the swellings had not returned; and as his appetite continued to be good, he discontinued the use of his medicines.

Oct. 9th. The ship arrived safely in Liverpool harbour; and on the 15th, I saw the patient in good health, employed as a waiter in a tavern.

From the success of the above medicine in this and other cases I have heard of, I am of opinion it will succeed in all dropsies that are not owing to a fixed cause, such as scirrhosities of the liver, spleen, mesentery, &c., and which, of course, will require a different treatment.

FARTHER REMARKS

ON THE EFFICACY OF

BLUE VITRIOL IN THE CURE OF DROPSY.

[Communicated in a Letter to Dr SIMMONS, F. R. S. and first published in the London Medical Journal for the Year 1789, vol. x. page 149.]

Edinburgh, 1*st March* 1789.

AGREEABLY to my promise, I now send you some farther remarks on the cure of certain species of dropsy by blue vitriol, which I hope you will deem worthy of a place in the London Medical Journal.

From the number of fatal accidents that have happened from the use of copper vessels, speculative authors have set down all the preparations of that metal as virulent in their effects, and of a deleterious quality; but this depends altogether on the substances with which the copper is combined. It is indeed certain that verdigris, however formed, and taken into the stomach in any considerable quantity, destroys animal life; but on the other hand, cuprum ammoniacum * (Pharm. Edinensis), in proper doses, has been found efficacious in several cases of epilepsy, and other spasmodic diseases: and blue vitriol has long ago been found effectual in removing obstinate agues, and lately very beneficial in phthisis pulmonalis.

The last mentioned preparation I have found not only a

* Copper combined with the volatile alkali.

safe, but successful remedy in certain species of dropsy, even in ascites, where there was a fluctuation to be felt in the abdomen, depending perhaps solely on a relaxation and debility of the whole system. As farther proofs of its good effects in affections of this sort, I shall relate the two following cases.

Case I.—John Maclaurin, aged fourteen years, son of a poor woman in the town of Falmouth, on the north side of Jamaica, from living by the side of a morass, had contracted an intermittent, which lasted from August 1784, till April 1785, when it first degenerated into a remitting, and then into a continued fever. He was rescued at length from this dangerous state, by the skill and humanity of Dr Brown: but after this fever had left him, he neither had appetite nor recovered his strength.

When I visited him about the middle of April, he was very weak; his face was pale and bloated; his feet swelled towards bed-time; and his urine was scanty and highly coloured.

From the duration of these fevers, I was at first led to think that the hydropic symptoms were owing to visceral obstructions: I therefore ordered one grain of calomel, and twenty drops of laudanum, to be given at going to bed. These medicines were taken regularly for the space of a week, but without success: for the anasarca became general; the scrotum and penis were greatly distended; the abdomen was swelled, and there was a fluctuation of water in it to be felt.

I now began to think that the opinion I had at first entertained of the cause of the symptoms might not be well founded, and that what I had at first ascribed to visceral obstructions, might perhaps be merely the consequence of debility: I therefore determined to vary the mode of treatment, and to make trial of the blue vitriol, according to the following formula:

℞ Vitriol. Roman.
Opii, ana gr. ss.
Corticis cauellae aromaticæ gr. j.
Mucilaginis Gummi Arabici q. s. f. pilula.

He took this pill morning and evening, and, at the end of a few days, the dose of the blue vitriol was increased to one grain.

This medicine gave him no disturbance. The quantity of urine was remarkably increased daily. The swelling soon subsided; his appetite returned; and in the beginning of May his disorder was quite gone.

Case II.—A woman, named Penny, aged thirty years, who had in general been healthy, had for some months an obstruction of the menses, for which she had taken a variety of medicines.

In May 1785, her abdomen was observed to swell, and as there was an evident fluctuation of water, different diuretics were administered, but without success; so that Dr Carlyle, who attended her, saw there was a necessity of tapping her, and this was accordingly done in the beginning of June.

To prevent the return of the dropsy, I recommended the use of the blue vitriol and opium. Dr Carlyle gave her a pill, containing at first, one grain, and afterwards two grains of blue vitriol, with one grain of opium, every night at bedtime. This medicine sat easy on her stomach, and excited no sort of uneasiness in the bowels. The quantity of urine was soon remarkably increased, and she found herself considerably mended.

About the middle of June, there being no appearance of the ascites, Dr Carlyle pronounced his patient out of danger, and the pills were discontinued. The woman recovered her wonted health; the monthly discharge returned, and she has since continued well.

DESCRIPTION

OF THE

JESUITS' BARK TREE

OF

JAMAICA AND THE CARRIBBEES.

[Communicated by Joseph Banks, Esq. F. R. S., and read before the Royal Society the 24th of April 1777. Originally published in the Philosophical Transactions, vol. lxvii. part 2d, p. 504.]

This species of Jesuits' Bark grows on stony lands near the sea-shore, in the parishes of St James and Hanover, on the north side of Jamaica; and I found one small tree, at a little distance from the fort, at Martha Brae, in the parish of Trelawny. The tree is called the Sea-side Beech, and rises only to twenty feet. The trunk is not thick in proportion, but hard, tough, and of a yellowish-white colour in the inside. The branches and leaves are opposite; the leaves are of a rusty-green, and the young buds of a bluish-green hue. It blossoms in November, and continues in flower till February, having on the same tree or sprig flowers and ripe pods. The flowers are of a duskish-yellow colour, and the pods black. When ripe, they split in two, and are, with their flat brown seeds, in every respect similar to those of the *Cinchona officinalis*, as depicted in a plate sent out by Mr Banks.

The bark of this tree in general is smooth, and grey on the

outside, though in some rough and scabrous. When well dried, the inside is of a dark-brown colour. Its flavour at first is sweet, with a mixture of the taste of horse-radish, and of aromatics of the East; but when swallowed, of that very bitterness and astringency which characterises the Peruvian bark. It yields these qualities strongly to water, both when cold, and in decoction. Half an ounce boiled, from two pounds to one pound of water, made as strong a decoction as three times its weight of the *Cinchona vera*. The colour was brown, but not turbid.

I have had many opportunities of trying its effects, especially in remittents, which are the most common and fatal fevers in these climes. A vomit, or gentle purge, if necessary, was first given; and then immediately this bark, as soon as they operated. I observed that it strengthened the stomach, checked retching and vomiting, corrected morbid humours in *primæ viæ*, and conquered speedily the disease. My success in such a dangerous malady, leaves not a doubt on my mind but that it will prove equally efficacious in every other case, where a tonic and antiseptic medicine is indicated.

Cinchona Jamaicensis seu Carribbeana.—*Cinchona Carribbæa*, Lin. Spec. Plant. 245.

Fol. ovata, integerrima, acuta, enervia, opposita.

Flor. singulares, axillares.

Cal. *Periantium* monophyllum, superum quinquefidum, minimum, persistens, campanulatum, obsoletissimè quinquedentatum.

Cor. monopetala, infundibiliformis. *Tubus* cylindraceus, longissimus: *Limbus* quinquepartitus, tubo æqualis: *Laciniis* ovatis, oblongis, reflexis, quandoque pendulus.

Stam. *Filamenta* quinque, filiformia, erecta e medio tubi, longitudine corollæ. *Antheræ* longissimæ, obtusæ, erectæ supra basin exteriorem, affixæ in fauce corollæ.

Caps. bipartibilis in duas partes dissepimento parallelo, latere inferiore dehiscens.

Sem. plurima compressa, marginata, oblonga.

DESCRIPTION AND USE

OF THE

CABBAGE-BARK TREE

OF

JAMAICA.

[Communicated by Richard Brocklesby, M. D. F. R. S. and read before the Royal Society, the 1st May 1777. Originally published in the Philosophical Transactions, Vol. lxvii. Part 2d, p. 507.]

The Cabbage-Bark Tree, or Worm-Bark Tree, grows in most parts of Jamaica, and particularly abounds in the low savannahs of St Mary and St George. It rises to a considerable height, but no great thickness, sending off branches towards the top of a straight smooth trunk. The leaves are, when young, of a light green hue; when full grown, of a dark-green colour; and before they drop of a rusty appearance.

The flower-spike is long, and beautifully branched. The flowers are numerous; their *calyces* of a dark purple; their *petals* of the colour of the pale rose; the *nectaria* must contain much honey, as thousands of bees, beetles of various kinds, butterflies, and humming birds, are continually feeding thereon.

The *pericarpium* is a green hard fruit, of the size of the smaller plum. The skin is of the thickness of a crown-piece; and tastes very austere. The kernel is covered with

a brown skin, like that of other nuts; it is very hard, and tastes astringent.

The wood is hard, and takes a good polish. It is, however, fit only for rafters, or other parts of small buildings; but this tree is valued chiefly for its bark, which externally is of a grey colour, and the inside black and furrowed.

Fresh cabbage-bark tastes mucilaginous, sweet and insipid. Its smell, however, is rather disagreeable, and it retains it in the decoction; hence by some called the Bulge-water Tree.

Mr Peter Duguid, formerly of this island, seems to have been the first that gave any account of the virtues of this bark, in the Edinburgh Essays, Physical and Literary, vol. ii. The experiments he promised have never yet appeared. It is certain it has powerful effects, and its anthelminthic quality is established by the experience of several ages. It is at present in general use here, and begins to be known in Europe. No description having yet appeared, I have supplied that defect as far as my abilities in botany reached. It remains now to proceed to its exhibition, and the purposes it is meant to answer as a medicine.

Cabbage-bark may be given in different forms, as in decoction, syrup, powder, and extract. I have used them all, and shall speak of them separately.

The decoction. Take fresh dried, or well preserved cabbage-bark, one ounce; boil it in a quart of water, over a slow fire, till the water is of an amber colour, or rather of deep-coloured Madeira wine; strain it off, sweeten it with sugar, and let it be used immediately, as it does not keep many days.

Syrup of cabbage-bark. To any quantity of the above decoction add a double portion of sugar, and make a syrup. This will retain its virtues for years.

The extract of cabbage-bark is made by evaporating the strong decoction *in balneo mariæ* to the proper consistence;

it must be continually stirred, as otherwise the resinous part rises to the top, and on this probably its efficacy depends.

The powder of well-dried bark is easily made, and looks like jalap, though not of equal specific gravity.

This bark, like most other powerful anthelminthics, has a narcotic effect; and, on this account, it is always proper to begin with small doses, which may be gradually increased till a nausea is excited, when the dose for that patient is ascertained. But, by frequent use, we can in common determine the dose, though we choose to err rather on the safe side.

A strong healthy grown person may at first take from four table-spoonfuls of the decoction or syrup, three grains of the extract, or thirty grains of the powder for a dose.

A youth, three table-spoonfuls of the decoction, or syrup, two grains of extract, or twenty grains of powder.

A person of ten years of age two table-spoonfuls of the decoction or syrup, one grain and a half of extract, or fifteen grains of the powder.

Children of two or three years old, a table-spoonful of the decoction or syrup, one grain of extract, or ten grains of the powder. Children of a year old, half the quantity.

These may be increased, as above observed, till a nausea is excited, which will depend on the strength, sex, and habit of body of the patient.

Care must be taken that cold water be not drank during the operation of this medicine, as it is in this case apt to occasion sickness, vomiting, fever and delirium. When this happens, or when an over-large dose has been given, the stomach must be washed with warm-water; the patient must speedily be purged with castor-oil, and use plenty of lime-juice beverage for common drink; vegetable acid being a powerful antidote in this case, as well as in an over-dose of opium.

The decoction is what is mostly given here, and seldom fails to perform every thing that can be expected from an anthel-

minthic medicine, by destroying worms in the intestines, and bringing them away in great quantities. By frequent use, however, these animals become familiarised, and we find it necessary to intermit it, or have recourse to others of inferior merit.

The writers of the Edinburgh Medical Commentaries take notice, that the decoction of cabbage-bark always excites vomiting. We find no such effect from it here, and may account for it, by their receiving it in a mouldy state. A syrup, therefore, is given there with better effect. They observe, also, that it has a diuretic virtue, which we have not taken notice of here.

This bark purges pretty briskly, especially in powder, thirty or forty grains working as well as jalap by stool; but, in this way, it does not seem to kill worms so well as in decoction.

Five grains of the extract made a strong man sick, and purged him several times; but, by frequent use, he took ten grains to produce at length the same effect.

It must not be concealed that fatal accidents have happened from the imprudent administration of this bark, chiefly from over-dosing the medicine. But this cannot detract from the merit of the cabbage bark, since the best medicines, when abused, become deleterious; and even our best aliments, in too great quantity, prove destructive. Upon the whole, the cabbage-bark is a most valuable remedy, and I hope will become an addition to the *Materia Medica*.

Geoffræa Jamaicensis inermis.

Fol. opposita, oblongo-ovata, ternata, acuminata, supernè glabra, infernè enervia, petiolis brevibus.

Cal. *Perianthium* monophyllum, campanulatum, levissimè quinquepartitum, *laciniis* ovatis brevibus.

Cor. papilionacea: *Vexillum* subrotundum, concavum: *Alæ* obtusæ, concavæ, longitudine vexilli. *Carina* ovata, patens, in duabus partitus levissimè divisa.

Stam. diadelpha, decem, filiformia, in calyce inserta, longitudine alarum. *Antheræ* subrotundæ.

Pist. subulatum, filiforme. *Stigma* nullum. *Germen* ovato-oblongum, compressum.

Per. *Drupa* sub-ovata, magna.

Sem. *Nux* sub-ovata, sub-lignea, sulco utrinque longitudinali, bivalvis.

The botanical reader will see how nearly this agrees with the *Geoffræa spinosa* of Linnæus. The genera of plants are sufficiently multiplied, and it was thought best to make this a species only.

AN ACCOUNT OF A REMARKABLE FACT

RELATIVE TO

THE SMALL-POX.

[Communicated in a Letter to Dr Simmons, F. R. S. and first published in the London Medical Journal for the Year 1786, vol. vii. p. 63.]

Having lately read an account of a curious fact relative to inoculation, communicated by Mr Dawson, * surgeon at Sedbergh, in Yorkshire, to the College of Physicians in London, and published in the third volume of their transactions; I beg leave to observe to you, that, in the course of a long and extensive country practice in Jamaica, many facts have occurred to convince me that, in the case of the small-pox, a person may have a local affection without the habit in general being tainted by the variolous poison. I have often had occasion to observe that the arms of patients inoculated will inflame and discharge an ichor for a few days, and then dry up without the infection going farther; yet those very persons inoculated afresh, have at the proper time, had the small pox fever and eruption, although the fact related by Mr Dawson, serves to prove that the ichorous discharge from the first incision in those patients would have been capable of communicating the variolous infection to other persons.

Nurses who suckle children ill of small-pox, frequently have a few pustules on their breasts and arms without any previous fever; and any body who attends closely to, and handles patients in that distemper, will be liable to have pus-

* The reader will find an abstract of Mr Dawson's paper in next article.

tiles in the same manner. This has more than once happened to myself since the year 1745, when I had the small-pox in the natural way, and that such local affection is truly variolous, the following experiment puts beyond a doubt.

In July 1768, six valuable Negroes were inoculated from matter taken from a patient in the natural small-pox; but their arms dried up about the sixth day. As many Negroes on the same estate had that disorder, there was danger of their catching it in the natural way. They were therefore sent to my house to be again inoculated, and to stay till the issue was certain. At that very time I had a large variolous pustule on my left thumb, of seven days' standing. No other infection being at hand, I inoculated the six Negro men from this pustule. The infection took place; they had the variolous fever on the seventh and eighth days, and the eruption appeared in the usual manner. Two of these men had about five hundred pustules, the other four had the disorder more mildly. They returned home quite recovered in sixteen days from their last inoculation.

London, January 20 1786.

An account of a singular fact in the practice of Inoculation of the Small-Pox.—By Mr John Dawson, Surgeon at Sedbergh in Yorkshire. Vide Medical Transactions published by the College of Physicians in London, vol. iii. 8vo. London 1785.

This is the fact alluded to by Dr Wright in the preceding article. Mr Dawson having inoculated two children in one family, observed, on the third day, a slight inflammation around the places of incision. On the fifth day the inflammation was considerably increased, and on the eighth it extended nearly to the breadth of half a crown.

With matter taken from the arms of these children at this

period, he inoculated nineteen other persons, and every one of these had a fever and eruption of pustules at a proper time; but the two children from whom the matter had been taken did not sicken as was expected, and, on the eleventh day, the inflammation upon their arms was considerably abated; and two or three days after this there remained nothing but a dry scab.

In conformity to an opinion hitherto generally adopted, our author now ventured to assure the parents, that their children were secure from future infection of the small-pox; but they having insisted on their being again inoculated, a second incision was made in the arms of each. A fresh inflammation succeeded around the places of incision, and went on in the same manner it had done before, till about the ninth or tenth day, when the patients sickened, and had a smart fever, during three days, after which appeared a considerable number of variolous pustules.

PRACTICAL OBSERVATIONS

ON THE

TREATMENT OF ACUTE DISEASES;

PARTICULARLY THOSE OF THE WEST INDIES.

[Communicated by Dr WRIGHT, in a Letter to MAXWELL GARTHSHORE, M. D. F. R. S. Physician in London; and by him to Dr SIMMONS. From Medical Facts and Obs. vol. vii.]

DEAR SIR,

IN compliance with your request, I now communicate to you some observations on the treatment of acute diseases, particularly those of the West Indies.

I shall begin with the Typhus, Nervous, Ship, or Jail, Fever, as it is differently styled by different writers.

In a former letter I remarked to you, that the application of cold water externally had been, for some time, practised by Dr GREGORY, Professor of Physic in this University, in cases of typhus, with remarkably good effect; but he has never carried it to the extent I did in my own case, and in that of others, several years ago *. Instead of dashing cold water on the naked body, as I did, Dr GREGORY orders the bodies of his patients to be washed with a sponge, dipped in cold water and vinegar, at least twice a-day. This operation

* See London Medical Journal, vol. vii. p. 109.

I shall call the *Lavatio frigida.* The earlier this mode is practised the better; because, in typhus, the patient grows daily worse; for in the second week there is a great increase of fever, and a proportionate loss of strength: but even then Dr Gregory has found the application of the wet sponge act as a charm; nor have delirium or petechiæ been considered by him as any bar to the adoption of this remedy; on the contrary, where these have been present, and the pulse much quickened, he has, by the *lavatio frigida*, speedily reduced the pulsations from 110 to 90 in a minute, and the delirium and other threatening symptoms have soon after disappeared.

About a fortnight ago, a student of physic, who had been ill for some days before Dr Gregory was applied to, had, besides a great degree of fever and delirium, numerous spots, or petechiæ, on his breast, belly, and extremities. The *lavatio frigida* was used on the day the Doctor first visited him, and by next morning the delirium had ceased, and the petechiæ disappeared. The pulse, which on the preceding day had been at 110, was now at 80; and by continuing the application of the wet sponge now and then, the pulse became natural on the fourth day after the Doctor first saw him. Many similar cases might be adduced from the books of the clinical ward of the Royal Infirmary.

Successful as this method has been in the hands of Dr Gregory, and some others, besides mine, I am well aware that much caution and judgment are necessary in putting it in practice. In all cases where there are visceral obstructions, cold bathing does much mischief; and in fevers of this sort, with inflammatory diathesis, there is reason to suspect topical inflammation of the viscera; in this last case, if cold bathing were made use of, the patient would run the risk of his life, and the physician justly lose his character. Other methods of treatment must therefore be had recourse to, and these I will

endeavour to point out, from a successful practice in the West Indies, as well as in this country.

In fevers where there are but slight signs of inflammatory diathesis, mild antimonials, as James's powder, the antimonial powder of the shops, or antimonial wine, in small and repeated doses, with occasional opiates, are generally sufficient to open the pores of the skin, and occasion a gentle perspiration. But where these or the like mild means are of no avail, there is every probability to suppose that topical inflammation, internally, has taken place.

In cases of this sort I have immediate recourse to calomel, either by itself, or joined with antimonials or opiates. The quantity of calomel I employ is proportioned to the violence of the disorder, and the danger the patient is in. In this country I have seldom exceeded five or six grains of calomel a day; but in the West Indies I have given twenty grains in twenty-four hours with the most marked success.

In 1771, Dr Lysons published his Essay on the good effects of Camphor and Calomel in continual fevers. In such cases I have found no occasion for the first of these; and Dr Lysons' success with the latter must have been in cases where there was a morbid and topical affection of the viscera and alimentary canal.

About fourteen years ago, I communicated my method of treating obstinate and acute diseases, in the West Indies, to an eminent physician who had the care of a large hospital in England. He gave calomel, in large and frequent doses, in fevers that resisted the common methods of cure, and found it to answer far beyond his expectations. It sometimes had no other effect than occasioning a copious stool at times; but for the most part it acted as a mild diaphoretic and sedative: a crisis, or favourable turn of the fever was soon brought about, and the patient speedily recovered.

It seems hardly necessary to mention to you, that in all cases of typhus there can be but little hope of success, unless

the patients are brought into spacious and well-aired chambers, and are lightly covered with bed-clothes.

In the first stage of typhus, brisk small beer may be given plentifully for common drink, or water slightly impregnated with vitriolic acid. The strength of the patients should be supported by giving them frequently panada, or gruel, with wine. Attention, too, must be paid to the state of the belly, and of the other emunctories.

Some late authors, who have written on West India diseases, have roundly asserted, that in tropical countries fevers are not contagious; but whoever has had the care of crowded hospitals, of jails, of ships of war, or of transports full of troops, must have seen numerous and fatal instances of contagion in the West Indies; more especially where cleanliness and free ventilation have been neglected.

From causes of this sort a most fatal and destructive disorder broke out in the West Indies in 1793, and soon after in Philadelphia, viz. the yellow fever. Dr Rush has classed this disorder with remittents; but every one who has practised in the West Indies, knows for certain, that the remittent fevers of warm countries are not contagious. From Dr Rush's book, and from the numerous letters of my correspondents, there remains not a doubt, in my mind, of the yellow fever being typhus, exalted to a great degree of virulence from climate, situation, and other adventitious circumstances.

The yellow fever has appeared in America at different periods, as we learn from Dr Lining's paper in the Edinburgh Essays, Physical and Literary, vol. ii.; and it was this same disorder that committed such havock amongst the troops under Admiral Vernon, in 1741.

The commencement of this fever, in Grenada, is dated from May 1793, soon after the arrival of a Guinea ship from Sierra Leone, the crew of which had been so sickly, that most of the sailors died of the yellow fever, either in the voyage, or soon after the arrival of the ship. It suddenly spread over

the other Leeward Islands, and from thence was carried to Philadelphia, Hispaniola, and Jamaica.

The first account I received of this fever was from Dr James Clark, a physician of eminence in Dominica; his letter to me is dated July 23, 1793, and runs as follows:— "I have been harassed night and day, for a month past, by attendance on people ill of the yellow fever. Since its appearance in this island, it has already carried off more than a hundred sailors, new comers, and emigrants. In its progress it has been, and still is, as quick and fatal as the plague; it often finishes its course in forty-eight hours; but if the sick get past the fifth day, they generally recover."

All the letters I have had from my medical friends agree that this fever is highly contagious, and that new comers are most subject to receive it; particularly such as are young, or are addicted to drinking spiritous liquors. Next to these are the nurses and attendants on the sick, who breathe the air in their chambers, or handle their bodies or bedclothes. But such as avoid infected houses, or keep at a distance from people convalescent, are no way subject to the yellow fever. It appears, also, that people of colour, and Negroes, are in a manner totally exempted from this disease, except such as are employed as house-servants, and fare the same as white people.

The Creole white inhabitants, and others who have long resided in the islands, are, it seems, seldom attacked with this disorder, unless under the circumstances above mentioned. But why the yellow fever should attack some, and not others, can only be accounted for in this way,—that, in order to receive or resist contagion, men's bodies and minds must be in a particular state; and that field Negroes should not be liable to it is to me inexplicable. They, however, have their epidemics, from which white people are exempted.

This disorder seems to exert its direful effects on the stomach, intestines, and other viscera in general, but particular-

ly on the liver and gall-bladder. Sometimes the lungs are greatly affected; and extravasations have been found in the brain after death.

It is not my intention to delineate the progress and symptoms of this fever; it will be sufficient to say that bilious vomitings are amongst the concomitant and distressing symptoms of yellow fever; and that what is called the Black Vomiting generally happens towards the fatal termination of the disease.

I hasten to the medical treatment as practised by Dr James Clark, and others of my friends in the West Indies. Dr Clark, in his letters to me on this subject, regrets his being called so late to the sick in this fever, twenty-four hours having often elapsed before he has seen them: but even at this late period, says he, "I have been lucky enough to save three out of four, or four out of five, of those who had the yellow fever." In cases where he has been called in on the first day of the fever, he assures me he has seldom lost any one. He first endeavours to purge briskly with ten grains of jalap and ten grains of calomel every three hours. If the vomiting continues, ten grains of calomel, by itself, are given, till stools are procured; and after this calomel, in doses of five grains, with or without opium, every third or fourth hour. In urgent cases he has recourse to mercurial friction, till the violence of the symptoms has abated. "If," says he, "I can by any means introduce a sufficient quantity of mercury into the habit in time, so as to affect the mouth and gums, I have no hesitation in declaring that my patient is out of danger."

Dr Clark has given sixty or eighty grains of calomel in three days; Dr Drummond, a learned and eminent physician in Jamaica, has given 200 grains in the same space of time, besides friction with strong mercurial ointment, with success.

With regard to bleeding, Dr Clark tells me he has now and then had occasion to order it in full habits; he has recourse to this, however, but seldom, and then very sparingly. In Jamaica the lancet is now laid aside in the treatment of this disease; as some young men, who were seized with the yellow fever, and blooded on the day of the attack, died in a few hours after. The American practice, therefore, will not succeed in the West Indies.

In cases where the strength of the patient is much reduced, the strongest wines, or even brandy itself, must be freely used. Dr Drummond tells me, that in such dangerous stages of the the disease, even when the black vomiting has come on, he has given the pepper medicine * with success. The use of this medicine is continued till a generous warmth takes place, which must be kept up so long as the delity or the vomiting last; but, in the mean time, the use of mercury must be pushed vigorously, till the mouth is affected, and till there are evident appearances of a resolution of the disorder, and an abatement of the most violent symptoms.

In such stages of typhus, where there were petechiæ, a difficulty of swallowing, or a sense of choking; or where aphthæ were present, or there was a great irregularity of pulse, I have found the use of ether † very beneficial.

Hitherto the black vomiting has usually been considered as a fatal symptom; and a remedy to obviate it has long been a desideratum amongst physicians ‡. To whom the happy discovery of such a remedy, in the capsicum, is owing

* This is composed of three grains of powder of Cayenne pepper, made into a pill with mucilage, and may be given every two or three hours; but unless the pill is well coated with dough, or white wafer, it will be difficult to persuade the patient to swallow a second dose.

† For an account of the efficacy of the spiritus vitrioli dulcis in fevers, see a valuable paper, by Dr Smyth, in the Medical Communications, vol. i.

‡ Dr Barham of Jamaica, contemporary of Sir Hans Sloan.

I have not yet learned; but he merits the thanks of his country, and of mankind!

That a medicine of so hot and fiery a nature, as Cayenne pepper, can be given with safety and efficacy in a disorder so evidently inflammatory, is truly surprising, and can only be accounted for in two ways: first, by supposing that the stimulus of the pepper is stronger than that of the contagion; or, secondly, (to use the language of my late ingenious friend Mr JOHN HUNTER), that it induces a different action in the stomach and first passages.

On the treatment of Intermittents I have but little or nothing new to offer: in such cases I have found every advantage from following the advice of my late excellent friend Dr JAMES LIND of Haslar, by giving a large dose of laudanum in the hot fit: this has seldom failed to produce a plentiful and kindly diaphoresis, and the disorder, in general, has afterwards been cured by the Peruvian bark.

Where intermittents have either been neglected or improperly treated, or where the bark, so far from being of service, has served only to load the stomach, or has been rejected, I have suspected that some visceral obstructions existed. In such cases, calomel, in small doses, has had the happiest effect, and the patients have generally recovered without any other medicine.

Quartans and double tertians, as well as simple intermittents, are occasioned by marsh miasmata. In warm countries they are frequent, and difficult of cure; and unless the sick are removed to better air, the disorder will baffle the skill of the most experienced physician. Fevers of this sort, if even continued but for a short time, occasion obstructions of the liver and mesenteric glands, which are too often followed by jaundice, dropsy, and death.

In such cases, after clearing the stomach and primæ viæ, I order mild antimonials, opiates, and calomel; by these

means the disorder is soon removed, as I have experienced in a great number of cases, attended with the most unfavourable appearances.

The common remitting fevers of tropical countries generally yield to the methods prescribed by Drs Cleghorn and Lind, viz. cleansing the primæ viæ, then giving the bark, wine, and nourishing diet; but if they are attended with bilious vomiting, and symptoms of inflammatory diathesis, calomel, in small doses (as two grains every three hours), appeases the vomiting, opens the belly, and brings on a gentle moisture on the skin. After this the bark may be tried, but I have often seen the sick recover sooner without it.

Where fiery eruptions, with swelling and inflammation, break out in the mouth and lips, at the decline of bilious remittents, quartans, and other obstinate fevers, Dr Kirkland justly remarks, that the whole alimentary canal is affected with this sort of erysipelas. To that author I am indebted for the treatment of the patient in this critical and dangerous stage of the disease. Calomel, either by itself, or joined with mild antimonials and opiates, in small doses, does every thing that can be wished for. If the eruption has continued any length of time, and degenerated into little ill-disposed ulcers and scabs, the *unguentum hydrargyri nitrati* effectually cures them in three or four days.

Remitting fevers, arising from marsh miasmata, are frequently obstinate and fatal. In many cases of this kind the tongue is furred and slimy, and the vomiting incessant, with great headach and prostration of strength. Sometimes I have settled the stomach with a decoction of camomile flowers; at other times by saline draughts, taken in an effervescing state; but the most effectual remedy I have ever tried, has been a slight infusion of the *quassia polygama*, or bitter-wood*; af-

* See the account of this tree by Mr Lindsay, in the Transactions of

ter which the Peruvian bark, or Jesuit's bark of Jamaica*, has completed the cure.

In bilious remittents I have seen a yellow suffusion over the whole body occur in the course of the disease; sometimes in the first stage, but more frequently towards the end of the fever, which too often terminated fatally.

In 1785 a gentleman† at Hampden estate, in Jamaica, was seized with a bilious remittent, attended with constant retching and vomiting of bile. I was called to his assistance on the fourth day of his disorder; his skin was then of a deep yellow colour, and his urine tinged linen cloth, as in jaundice: the whole of his symptoms indicated extreme danger. My first object was to procure stools by means of stimulating injections, and small doses of the compound powder of jalap; but as the vomiting continued, and the fever remained high, I determined to give him two grains of calomel every two hours. On the following day he was better, but the use of the calomel was continued till the evening, at which time his stomach was settled. He had two copious evacuations by stool; the fever was greatly abated, and there was a gentle moisture on the skin, which I encouraged by small doses of antimonial wine, and watery tepid drinks. After this he recovered daily, but the yellowness of the skin continued some weeks before it wore completely off.

There are other acute diseases, in warm countries, that are very destructive in their nature; among these is the hepatitis, or inflammation of the liver. It is either acute or chronic. In acute hepatitis there are strong symptoms of phlogistic diathesis; and these I endeavour to obviate by a moderate bleeding, gentle laxatives, and diluting drinks. The application of a blister over the part affected is sometimes useful. If

the Royal Society of Edinburgh, vol. iii. and Medical Facts and Observations, vol. v.

* Philosophical Transactions, vol. lxvii.

† Mr Alexander Thorburn, at present in Scotland.

the fever and pain continue, I prescribe small doses of antimonial powder or antimonial wine, to bring on a gentle perspiration; should this, however, be not speedily brought about, I lose no time in exhibiting mercury internally and externally, till the disease is conquered; and this I have done with uniform success for twenty-seven years; whereas acute hepatitis, treated by frequent and copious bleeding, too often terminates in phthisis pulmonalis, or some other fatal disorder.

The chronic hepatitis is very common in Great Britain, and is often mistaken for dyspepsia. Small doses of calomel, (as a grain at bed-time every night for a fortnight) are in general sufficient to remove it.

Pleurisies and acute peripneumonies are common and fatal diseases in all tropical countries, especially amongst the Negroes who live upon estates in the hilly and mountainous parts of Jamaica.

In the cure of pleurisies, bloodletting is at first requisite; but a repetition of it requires much caution. Profuse and repeated evacuations of this sort weaken the system; and I have seen many instances, where an improper use of the lancet in such cases has been succeeded by general debility, pulmonary consumption, and dropsy. In these diseases, after one, or at most two moderate bleedings, I direct the belly to be opened by clysters, or some gentle laxative; give nitre dissolved in the patient's common drink, and advise a thin spare diet. A blister applied to the side affected generally gives great relief. But if the fever is considerable, and the pain acute, I order from three to six grains of antimonial powder every two hours, till a plentiful sweat takes place, which I encourage by a liberal use of warm tea, or water-gruel. If small doses of the antimonial powder have not the desired effect, I give ten, fifteen, or twenty grains for a dose; nor am I afraid of exciting full vomiting, either in pleurisy or

peripneumony; on the contrary, such doses have proved highly beneficial.

When the disorder has resisted these means, I have ordered, with great success, calomel, in large and frequent doses, as long as the violent symptoms continued.

Pleurisies and peripneumonies are often epidemic amongst the Negroes in Jamaica, and attended with a remitting fever. Full vomiting is here particularly useful; in the exacerbations twenty-five or thirty drops of laudanum take off the spasm, and the bark secures the patient from a return of the complaint.

I might have mentioned splenitis, and other internal inflammations, but as they give way to similar management, I proceed to treat of the dysentery.

The dysentery has in every war carried off more of our troops in the West Indies, than all the other diseases of that climate. It is a melancholy truth, that this fatality is greatly owing to the folly and intemperance of soldiers and sailors, and not to the climate, which has been blamed for it. Drinking to excess of new and bad rum destroys the powers of the stomach, and debilitates their strength; they are either attacked by some violent inflammatory disorder, or are liable to receive infection from human bodies, or from marsh miasmata.

Europeans labouring under dysentery, in the West Indies, have more or less of remitting fever: in such patients bleeding, if at all necessary, ought to be had recourse to very sparingly. Negroes ill of dysentery, or other acute diseases, admit of a more free use of the lancet. In ordinary cases, an emetic of ipecacuanha, afterwards a dose of rhubarb and calomel, and an opiate at bed-time, generally carry off the disorder.

In epidemic dysenteries, attended with great prostration of strength, and other symptoms of putrescency, I am solici-

tous to purge off the offending matter in the alimentary canal, and afterwards to correct the disposition to putrescency: for this purpose I prescribe a strong decoction of tamarinds; in two pints of which I order two ounces of purging salt to be dissolved; an ordinary tea-cupful of this is directed to be taken every three or four hours, till it has operated plentifully by stool; after which, at bed-time, I give an opiate. On the following day the decoction of tamarinds, without the salts, is given; or the sick are allowed to eat preserved tamarinds, as they think proper.

In cases where this method has failed of success, I have had recourse to a mixture of vegetable acid and purified sea-salt, an account of the preparation and good effects of which I several years ago communicated to the American Philosophical Society, who have inserted it in their Transactions*; it is composed of lemon or lime juice three ounces; of sea-salt purified an ounce, or as much as the acid will dissolve; of any simple distilled cordial water one pint; and of loaf-sugar a sufficient quantity to sweeten it; of this a wine-glass full may be given to adults every two, four, or six hours.

A most respectable author defines dysentery to be a fever of the intestines, and for the cure of it prescribes antimonials and opiates, which in slight cases I have known to answer. This idea of the disease comes very near to my own: but when dysentery is attended with phlogistic diathesis, the fever is rather the effect than the cause of the disorder. Dissections of such as have died of dysentery, have evidently shewn, that inflammation, and consequent gangrene, had taken place in the smaller intestines, as well as in the colon.

In dysenteries where the fever has been considerable, the tongue dry and parched, the gripes severe, and the stools very frequent, with scarcely any thing else than blood or mucus, I

* See Transactions of the American Philosophical Society, vol. ii. 4to. Philadelphia, 1786; and London Medical Journal, vol. viii. p. 97. 8vo. London, 1787.

have prescribed, with good effect, calomel, in doses of five grains, every six hours, till a copious stool or two has been procured; and afterwards in smaller doses, with occasional opiates, while the fever and gripes have continued.

Autumnal dysenteries in this country have generally given way to some one or other of the correctors I have mentioned above; but particularly to an infusion of quassia polygama*, or bitter-wood; after which I have prescribed the Peruvian bark to strengthen the system.

In the treatment of the different diseases mentioned in this paper, you have seen the liberal use I make of calomel. I have contented myself with candidly relating to you the effects I have experienced from it, without attempting any theory of the mode in which these effects are produced. I think it necessary, however, to observe to you, that freely as I have administered calomel in different acute diseases, I have seldom, if ever, been surprised with a sudden salivation. I indeed have paid daily attention to the state of the mouth and gums, and as soon as I have observed the latter spongy, and that the tongue was beginning to be moist about the edges, I have desisted from the farther use of calomel; because I was then certain that a resolution of the disorder was begun, and that my patient was out of danger.

In answer to your question, how early I got the first hint of the use of calomel in fevers? I answer, it was my good fortune, for many years, to enjoy the friendship and confidence of the late Dr Lind of Haslar; and it was from his conversation, and the information contained in his excellent work on the Diseases of Warm Climates, that I learnt the East

* There is no such thing in the shops as Quassia amara. It is the Bitter-wood, or Bitter-ash, that is imported, and answers every purpose, perhaps better than the Quassia amara.—*Vide* Medical Facts and Observations, vol. v.

India practice of giving mercury in inflammations of the liver, and the success with which the late Sir JOHN ELIOT had treated visceral obstructions by the same remedy, all which I knew so early as the year 1760. But it was not before 1764 that I began to give calomel in so free a manner as I have done ever since, not only in hepatitis, but in all the other acute diseases I have treated of; and I extended its use from reasoning in my own mind, and from analogy. I have never had cause to repent of the further trials I made; but, on the contrary, have had reason to consider this practice as the happy means of saving the lives of a great number of people.

I think it right to add, that Dr DRUMMOND of Westmoreland, in Jamaica, whom I have already had occasion to mention more than once in the course of this letter, began to administer calomel in fevers and pleurisies as early as I did, though without our having had any communication on the subject with each other. I have since found that he learned the use of it, in such cases, from Dr SMITH, a physician at Savannah le Mar, who was in the habit of giving it, in doses of twenty grains, in acute diseases, with great success.

These observations are extended to a greater length than I at first intended. After all, you must consider the whole only as hints for the treatment of acute diseases; and if you are of opinion that they will be useful, you have my consent to make them public.

I have the honour to be,

With the greatest esteem and regard,

Dear Sir,

Your most obedient servant,

WILLIAM WRIGHT

EDINBURGH,
December 10. 1794.

REPORT

CONCERNING THE

DISEASES MOST COMMON AMONG THE TROOPS IN THE WEST INDIES.

[Extracted from the Annals of Medicine for the Year 1797.]

The following report* respecting the diseases most common among the troops in the West Indies, their symptoms, causes, and best mode of treatment, drawn up by Dr William Wright, physician to the army, and director to the military hospitals in Barbadoes, contains so much useful information to the practitioners in warm climates, that we have peculiar pleasure in being able to present it to our readers.

REPORT.

The disorders to which the troops in the West Indies are most liable are fevers and fluxes.

The fevers are either intermittent, remittent, or continued. Besides these, there are typhus or the jail-fever, ship-fever, yellow fever, &c. which are different degrees of the same disorder.

Of fluxes there are cholera, diarrhœa, and dysentery, of all of which in order.

* Annals of Medicine for 1797, p. 346.

INTERMITTENTS, OR AGUES.

Of intermittents we have common tertians, quotidians, and quartans. They differ in no respect from the agues in Great Britain, except that they are more violent in their symptoms, and often more fatal in their consequences, in the West Indies, as they frequently degenerate into continued fever, or occasion visceral obstructions, topical inflammation in the stomach, alimentary canal, and other viscera; hence jaundice, dropsy, dysentery, &c.

Causes.—Marsh miasma, the universal cause of all intermittents; especially when conjoined with heat and moisture in the atmosphere.

In the island of St Lucia, agues amongst the troops are endemic. The climate is hot, and at some seasons the rains are heavy and incessant. The earth is wet and soaked in water in the day-time, the exhalation by the heat of the sun is so great that the bodies of men may be said to be in a vapour-bath. At night the land-breeze is cold, moist, and chilly. If camps or barracks be placed to leeward of swamps or morasses, the stench is often intolerable, and never fails to produce agues, or other bad fevers, as well as dysentery.

The predisposing causes of agues are, whatever debilitates the system, as fatigue in the heat of the day, getting wet with rain, and sleeping in wet clothes, which frequently happens to soldiers in actual service. We add to these, poor living and intemperance in drinking spiritous liquors, particularly new rum.

The Cure.—Before a cure can be effected with any degree of success, the sick ought, if possible, to be removed from the neighbourhood of swamps or morasses, to hospitals situated on a rising ground, or dry gravelly soil.

In simple tertians, it is only necessary to cleanse the primæ viæ by gentle emetics and cooling laxatives; and immediately

thereafter to give the Peruvian bark in substance, in full doses, and at proper intervals, until the disorder be effectually stopt.

But if the ague has continued some time, and the patient complains of the bark loading his stomach, or if the bark be rejected, it is probable that topical affections of the alimentary canal, and of the viscera, are about to take place; and this will be certain, if, at the same time, there are symptoms of phlogistic diathesis. In this case, small doses of pulvis antimonialis, and saline draughts in an effervescing state, should be given to open the pores of the skin.

When these failed, one grain of calomel, given three times a-day, either alone or accompanied with an opiate, had the desired effect. The calomel was then discontinued, and the cure finished by the Peruvian bark.

Quotidians and *quartans* were treated in the same manner as tertians, but they are more difficult of cure. When there were signs of visceral obstructions, calomel, in small doses, was given daily, until a copperish taste was perceived in the mouth, and the gums were slightly affected, when it was discontinued. In this case the disorder generally disappears, without the farther use of the bark. But, should the ague recur, it may be easily stopped by a few large doses of powder of Peruvian bark.

In the cold fit of agues, draughts of warm ginger-tea, or warm water-gruel with wine, were given, and the patient was moderately covered with bed-clothes.

When the hot fit came on, and had continued about ten minutes, a large dose of laudanum was given with a happy effect. The pores of the skin were opened, a gentle diaphoresis came on, the patient was disposed to sleep, and in a little time freed of all his complaints. The Peruvian bark was now given with safety and success.

Accidental Symptoms.—It frequently happens in long pro-

tracted agues, or other fevers in the West Indies, that the patient is sick at stomach, and vomits a great quantity of green or porraceous bile, of an acid taste and corrosive nature; this discharge is sometimes critical. When it was not, magnesia, given in simple peppermint-water, generally put a stop to it, and gave the offending matter a turn downwards by stool.

A *coma* and *delirium* sometimes happened in the course of obstinate intermittents, and other fevers. It generally yielded to blisters on the ankles, sinapisms to the feet, cordials, the camphorated emulsion, or the pepper medicine. But in the advanced state of intermittents, where the powers of nature were exhausted, these were fatal symptoms.

Profuse sweatings occurred now and then after agues were checked, and weakened the patients greatly, disposing them to hectic fever and pulmonary complaints. The acidum vitriolicum dilutum, or elixir of vitriol, thirty drops three times a-day, in a glass of water, were then given. The sick were enjoined to sit up in bed, as soon as they perceived the sweats coming on, and to rub their bodies with a dry cloth; then to be anointed with a little sweet oil, camphorated hog's lard, or some other unctuous substance. Port wine, eggs, and milk, and a generous diet, greatly assisted in the cure.

Hæmorrhage from the nose. If this was to any excess, it was an alarming and dangerous symptom, as it weakened the powers of life, already debilitated by disease.

Keeping cool in the day-time, light covering in bed, the elixir vitrioli, and large doses of nitre, generally checked the hæmorrhage; afterwards, some preparations of the bark, with a diet of milk, eggs, and vegetables, were of the greatest service.

Hiccough is often an attendant in quartans, and other obstinate fevers; it is a very distressing, and often a dangerous symptom, more especially if it happen at the end of acute diseases.

If the tongue be moist, and the skin be open, it may be removed by simple peppermint-water, the camphorated emulsion, or the pepper medicine. (See at the end of this article.) When there were signs of phlogistic diathesis, a small blister was applied to the pit of the stomach, and two grains of calomel were given every three hours, which, in a short time, generally removed this symptom. Where hiccough was judged merely spasmodic, musk-boluses, assafœtida in substance, opium, ether, and the capsicum, had the desired effect.

Flatulencies after meals, or on the use of the bark, were sometimes observed; aloetics, in small doses, succeeded in removing them.

The consequences of intermittents are, jaundice, dropsy, visceral obstructions, and dyspepsia. We have already mentioned the successful treatment of visceral obstructions.

Jaundice and *yellow suffusion* generally yielded to gentle emetics, bitter watery infusions, small and repeated doses of aloetics, with calomel, or to kali acetatum, and a dose pulv. ipecac. comp. at bed-time.

Dropsies often follow intermittents. If they be owing to visceral obstructions, mild mercurials, and infusions of quassia, remove them; at other times, weak solutions of crystals of tartar, and Dover's powder, at bed-time, will accomplish a cure.

If they arise from debility, bitters, chalybeates, aromatics, aloetics, small doses of tincture of cantharides, and kali acetatum, by turns, with the use of the flesh-brush, will cure the patient. If with dropsical symptoms, the ague should recur, there is a necessity to put a stop to it, by large doses of the bark, in substance, with opium. Dyspepsia, for the most part, gave way to proper diet, bitter watery infusions of camomile, or quassia, with aromatics.

Dysentery, attending or following intermittents, is often obstinate, and always dangerous, of which hereafter.

REMITTING FEVER.

This fever varies so much in its appearance, from climate, situation, and the revolution of seasons, that a stranger in the West Indies would be at a loss how to class it. Sometimes it is mild in its appearance, and regular in its form; at other times it is more violent, and of an unfavourable aspect. There scarcely exists a boundary betwixt a remittent and an intermittent fever; the double tertian seems to be one and the same thing, differing only, perhaps, from circumstances.

Symptoms.—At first the patient has uneasiness, with languor, and, as he expresses it, is neither sick nor well. He has, afterwards, alternate heats and rigors, the heats especially in the extremities.

Headach and prostration of strength, nausea and frequent vomiting supervene, first of the contents of the stomach, afterwards of bile, of a yellow or green colour. The pulse at first is small and quick, afterwards full, but seldom hard. For the most part, there are pains in the back and loins, pains in the limbs, particularly the calves of the legs, and fore-arms. Frequently the patient complains of an acute pain at the top of the shoulder; others have universal pains over the whole body; and most of the sick have anxiety, great restlessness, and frequent sighing. As the heat increases, the face is flushed, and all the symptoms become worse. The headach is greater, and the patient is drowsy, or comatose: a sweat at last succeeds, which procures a partial abatement of the disorder. The tongue at first is white and slimy; but, in ardent cases, both the tongue and fauces become dry, brown, and chopt.

In most cases, at the beginning, there is little or no thirst; but in the advanced stage it is very great.

The urine is sometimes pale, but for the most part high-coloured.

In the second stage, every symptom is aggravated; the eyes look wild and inflamed, a delirium comes on; the tongue, when put out, is tremulous, and the voice faultering.

In severe cases, there is a yellow suffusion of the skin, and of the white of the eyes, sometimes attended with a tension of the abdomen, and sometimes with dysentery. The most distressing symptom is a constant retching to vomit. At last, the patient becomes comatose, has frequent hiccough, and cold clammy sweats, and sometimes an involuntary discharge of stools, and of urine; the face becomes hippocratic, and death closes the scene.

The causes of remitting fevers are the same as those of intermittents, particularly *marsh miasma*, and fatigue in the heat of the day. This fever is dangerous at all times, more especially if the patient continue exposed to the effluvia of swamps or morasses.

Cure. The first step is, an immediate removal of the sick to better air, and proper hospitals, where attendants are at hand, and every kind of provision made for their comfort and support.

In the beginning, or first stage of this fever, there was nothing else to be done, but to cleanse the alimentary canal, by some mild cathartic, such as a solution of manna and cream of tartar, or by small and repeated doses of natron vitriolatum, and immediately afterwards to give the bark in substance.

In the advanced stage, where the heat was considerable, and the vomiting frequent, early purging was practised with good effect. This was sometimes done with compound powder of jalap, in small or repeated doses, in saline draughts, or simple peppermint-water. But if these were not retained, two grains calomel, in a bolus, were given every two hours, which not only purged plentifully, but occasioned a copious

perspiration, and a remission of all the most violent symptoms.

Where there was great irritability of the stomach, opium was joined with calomel, and with the best effects. These were assisted by warm fomentations, or the warm bath.

As soon as a remission was brought about, the bark in substance was given, either alone, or with a few drops of laudanum added to each dose. The great danger in all fevers is, from the patient's falling low; and this is too often the case, as the sick are not sent into the general hospital when first taken ill, but after the first stage is past, and when there is every appearance of danger. In such cases, blisters were applied, cordials and stimulating medicines were given; such as camphorated emulsion, with a plentiful use of wine, which often revived the patient beyond expectation. The decoction of Peruvian bark, with a drachm of the extract to a pound, generally sat easy on the stomach, and brought on an agreeable and natural warmth.

As we consider this and other fevers, as arising from some debilitating power, we have enjoined a nourishing diet, and a free use of wine, as soon as the most urgent symptoms have abated; at the same time, *cleanliness*, both in person and bedclothes, was strictly attended to.

The treatment of particular symptoms, occurring in remittent fever, was the same as we have stated under intermittents.

CONTINUED FEVER.

Intermitting and remitting fevers, if neglected, or ill treated, very often degenerate into continued fevers. Dangerous symptoms supervene; such as congestions in the head and viscera, of which many instances occur in practice.

In recent cases of continued fever, much advantage has been gained by blisters to the ankles, by a free use of camphor, and of the bark.

If congestions in the head were suspected, blisters were applied to the head and back. If in the viscera, calomel and opium were given with evident benefit. As soon as the heat abated, the bark and port-wine had the happiest effects.

TYPHUS.

Under this head we class the nervous fever, the ship-fever, the hospital-fever, the jail-fever, the pestilential fever, the yellow fever, &c. All of these are different names for the same disease, and differ only from each other in malignity or violence, from local circumstances, the state of the atmosphere, or season of the year.

TYPHUS NAVIUM, SHIP-FEVER.

In transporting troops from England to the West Indies, this fever often breaks out, and rages with great violence.

Symptoms. The patient sometimes is indisposed for a day or two before the disease be marked, but frequently is taken ill at once, with lassitude, prostration of strength, irregular chills and heats, nausea, and sometimes vomiting. He has a slight headach, is restless in bed, has confused ideas, and troublesome dreams; there is no great heat of the skin, it is rather moist, cold, and sweating. The tongue at first is white, moist, and slimy; afterwards dry and parched. The countenance is pale and sunk, the eyes dull and languid, the belly irregular, the urine pale, and secreted in too great a quantity.

These symptoms go on increasing, a stupor comes on, the patient sleeps with his eyes half open, often mutters to himself, has subsultus tendinum, and keeps tumbling and picking the bed-clothes. The tongue, when put out, is tremulous; he can scarcely articulate, and swallows with difficulty.

A hiccough is extremely distressing, cold and clammy sweats become universal, the urine is voided involuntarily, as are also colliquative stools; death is then at hand, and soon closes the scene.

Causes of Ship-Fever. It is impossible to describe the horrors on board transports, when crowded with men, and neglected by officers. If the men be suffered to be dirty in their persons, in their bodies and bed-clothes; if they be permitted to be much below, and come little upon deck to breathe the open air; if they be not compelled to sweep and scrape their berths every day; if their bedding and hammocks be not got up, and aired every fair day; and, above all, if the men are not put watch and watch upon deck; these, or any of these causes, will produce fever; and we have seen transports arrive here, who had lost eighty men on the passage, and the rest objects for the hospital. Such officers as were attentive to cleanliness, &c. brought their men in high health and spirits, and fit for immediate service.

Cure of the Ship-Fever.—The sick, on being landed, were washed, either with cold sea-water, or water made milk-warm; they were completely shifted, and placed in clean well-aired wards, with dry bedding. If the fever was recent, an emetic was given, and then the primæ viæ cleansed by a solution of natron vitriolatum, and manna or cream of tartar. After this the bark was given, without loss of time, and with such success, that in less than a week the men were in general discharged, quite recovered.

In the beginning of the ship-fever, the cold bath had the best effects; and through the day, when the sick were hot, washing the hands and face suddenly in cold water and vinegar, was exceedingly refreshing. Light covering in bed was directed, especially where there was any preternatural heat. In the advanced stages of this fever, where there were symptoms of inflammatory diathesis, we had recourse to small doses of antimonial powder alone, or mixed with a few grains of

calomel. Where the body was costive, five grains of calomel proved to be the best laxative or purge.

In obstinate cases, blisters to the head and ankles, and the emulsio camphorata, gave great relief, and paved the way for bark, wine, and nourishment.

Our chief dependence in the cure of this fever was on fresh air, cold acidulated watery drinks, and supporting the patient's strength by proper food and wine.

What has been said of ship-fever will equally apply to the hospital-fever, or jail-fever; and for other concomitant symptoms, we refer to the treatment mentioned under Intermittents.

TYPHUS ICTEROIDES.—YELLOW FEVER.

The yellow fever appeared to be no other than the jail-fever, exalted to a great degree of malignity. In this place, we do not pretend to account for its appearance, or to determine from what state of the atmosphere it first had its rise, or was afterwards kept up. It is sufficient for our purpose to mention the leading symptoms, and best means of relief.

Symptoms.—This disorder began at first with alternate rigors and hot fits, giddiness and dimness of sight, the patient could not bear the light, the eyes looked dull, and half-closed when asleep; the white of the eyes was tinged with yellow; the eyes themselves seemed sunk, and the countenance fallen. The pulse varied, sometimes it was natural, but in general it was small and tremulous. The breathing was difficult, attended with sighing, anxiety, and restlessness.

The skin in general was hot, and had that biting feel so common in all malignant fevers; at other times the skin was cold and clammy.

There was uniformly a great prostration of strength, a loss of appetite, and a constant inclination to vomit; at first the contents of the stomach were thrown up, afterwards an abundance of bile. The tongue was dry and furred, the thirst

unquenchable, the body costive, the urine scanty, high coloured, and burning or scalding the urethra. Universal pains, especially in the joints, calves of the legs, and tip of the shoulder, often took place. The sleep was disturbed, and the patient inclined to delirium. The fever was without any sensible intermission at first, but afterwards there were evident remissions and exacerbations.

The second stage of this fever commenced sooner or later, in different cases; and instances have occurred where it finished its course in twenty-four or forty-eight hours. Every symptom rapidly increased, the senses were more disturbed, delirium and coma were constant; at times the delirium was low, but sometimes furious.

The vomiting of bile was incessant; at last, whatever was brought up had the colour of coffee; and this was denominated the *Black Vomit.* Hæmorrhages from the nose, the mouth, and even from the pores of the skin, were frequent and fatal appearances. The body now became yellow or livid, with cold and clammy sweats, the countenance hippocratic, the pulse sunk, and death put an end to the patient's misery.

Cure.—The *first* intention was directed to a speedy evacuation of the morbid matter; the *second* intention, to prevent the secretion and accumulation of more; the *third* to relieve the most urgent symptoms; and the *fourth* to obviate the mischief already done to the system.

First, early and brisk purging was put in practice. After some trials of various cathartics, we had recourse to large doses of calomel, repeated at short intervals, until a plentiful discharge by stool was obtained. By this means the vomiting, instead of being increased, was gradually abated, and at last subdued. By calomel, the pores of the skin were opened, a resolution of the fever was brought about, and the patient happily recovered.

Where patients were received in the advanced stages of yellow fever, we had still recourse to calomel, and at the same

time, when it was needful, to mercurial frictions, and the warm bath; and we recollect of no instance where mercury had been freely given, and persevered in till it shewed itself in the mouth, which was not attended with the happiest consequences.

In the beginning of the yellow fever, the cold-bath succeeded admirably, as in other species of typhus, but in the advanced stage much caution was necessary. Some lucky expedients, however, have been practised, which success alone could justify. Thus when the most urgent symptoms had been subdued, the patients were wrapt up in a wet blanket, a profuse sweat was brought on, and an immediate recovery was the consequence. In cases of excessive vomiting, effervescing saline draughts have at times been successful; but calomel, prudently administered, will in general have the desired effect. In all fevers where the stomach was irritable, and bile was pumped up, our dependence was on calomel; where it failed, danger was apprehended. We did not, however, despair; we gave capsicum pills, with the most marked success; and even where melæna, or the black vomit, had taken place, the capsicum has snatched the patient from the most imminent danger.

In all the cases of yellow fever which we have seen, we never found those enormous quantities of calomel necessary which are mentioned by many late writers. Ten-grain doses, indeed, were given, for two or three turns, until it operated by stool. If, after this, the fever was obstinate, the dose of calomel was reduced to two grains every three hours, till symptoms of resolution had appeared. It was then discontinued.

Respecting antimonials, the stomach was in too irritable a state to bear them in any form, and the lancet was not only unnecessary, but dangerous in the extreme.

CHOLERA MORBUS.

This may arise in the summer-solstice, without any other evident cause; but for the most part, it is owing to exposure to the heat of the sun, marsh effluvia, the eating immature fruit or improper food, or the drinking too much wine or spiritous liquors.

It begins suddenly, with severe vomiting and purging. The bile is secreted in too great a quantity, and much of it is puked up, the rest descends through the intestines: hence arise acute pains, griping and flatulencies in the bowels: and hence also is produced great thirst, heat, anxiety, quickness and inequality of the pulse, cramps in various parts, syncope, &c.

When this disease occurred, large quantities of rice-decoction, barley-water or the like, were given. These persevered in, for the most part stopped the vomiting. The medicines used were saline draughts, in an effervescing state, with a little powder of colombo, simple peppermint-water, with some drops of tinctura opii, at times. When every thing failed, we had succeeded with thirty drops of the elixir of vitriol every three or four hours.

DIARRHOEA.

Diarrhœas, or watery fluxes, may have been occasioned by cholera, by improper food, by catching cold, by living in an unhealthy situation, or by some peculiar state of the atmosphere. If diarrhœa was owing to a surfeit, or improper food, and proved violent, the same means were used as in cholera, viz. water-gruel, beef-tea, rice-water, or the like. Rhubarb was given in a saline mixture through the day, and an opiate at bed-time, joined to two grains of ipecacuanha. When all the acrid matter was thus washed off, cinnamon-tea, and decoction of cascarilla, finished the cure.

DYSENTERY.

Diarrhœa, when continued for any length of time, often terminated in dysentery. They seemed to be modifications of the same disease; for, so soon as the mucus of the intestines is washed off, or abraded, gripes and tenesmus come on, the stools are small, slimy, and often bloody. Unless this disease be soon remedied, it grows worse daily; and either proves fatal, or gets into a chronic state. In unhealthy situations, where fevers are frequent and dangerous, dysenteries often prevail, and partake of the reigning disorder, assuming many of their leading symptoms. But the most common dysenteries among the troops are occasioned by protracted fevers, and obstructed viscera.

At first, gentle emetics of ipecacuanha were given; then solutions of natron vitriolatum, of cream of tartar, or castor oil, were employed in small doses, frequently while the gripes and tenesmus continued; at bed-time a dose of pulv. ipecac. comp. to restore perspiration; and, lastly, cascarilla decoction, with the Peruvian bark. In obstinate dysenteries, we judged them to be owing to obstructed viscera, or topical inflammation of the intestines. In either case, some gentle doses of calomel, with occasional opiates, speedily removed every symptom of the disease.

CONTAGION IN FEVERS.

All the fevers we have mentioned were probably owing to heat, moisture, foul air, or marsh miasma. But they will, *under particular circumstances*, be more or less contagious.

This is a well known fact in all ages, particularly in fevers of the typhoid kind when once formed, and arrived at a certain pitch of malignity. We have seen how rapidly infection spreads amongst troops in transports, and in ships of war. That contagion, however, is stationary in the West Indies; for so soon as the men, ill of fever, are landed, washed, and shifted, not a single instance has happened, of contagion

in the general hospital here. The malignant, or yellow fever, which raged in all the islands in 1792 and 1795, was exceedingly contagious; many of the attendants on the sick fell victims to it, in Grenada, St Vincents, and Barbadoes.

CAMPHORATED EMULSION.

Take camphor sixty grains; rectified spirits of wine thirty drops; magnesia twenty grains; beat these in a stone-mortar, add, gradually, ten ounces of water, and half an ounce of loaf-sugar. One or two table-spoonfuls every three hours, shaking the glass.

THE PEPPER MEDICINE.

Take genuine Cayenne pepper sixty grains, common flour five grains, water a few drops, to make a mass of pills, which divide into twelve equal parts, and while fresh, roll in flour. A single pill every two hours, or as occasion may require.

The Medical Staff of Barbadoes having perused the above report, drawn up by Dr Wright, for the Medical Board of London, unanimously approved of the same and thereunto subscribed their names.

(Signed) Wil. Wright, M. D. *Physician to his Majesty's Forces.*
W. G. Straghan, *Garrison Surgeon.*
Josh. Rocket, *Surgeon to the Forces.*
Wal. Hugo, *Apothecary to the Forces.*

DISSERTATIO MEDICA INAUGURALIS

DE FRAMBŒSIA.*

PROŒMIUM.

Amongst the various disorders to which mankind are liable betwixt the Tropics, that of Yaws is the most remarkable, whether from the horrid appearance of the persons afflicted, or its direful effects in particular cases.

The yaws is an African distemper, and the name is probably synonymous with the generic name Frambœsia, from the resemblance of the eruptions or funguses on the skin to the strawberry.

In that part of Africa called Guinea, the yaws seems endemic, and attacks people of all ages, but chiefly children, or youth. The Negroes are predestinarians, and take no pains to avoid this or any other infectious disorder, but continue to live in the same house with the infected.

From Guinea it has been imported to all our West India Islands, and America, in both which it is very common, and now and then makes its appearance in this country. The havock this terrible disorder annually makes amongst the Negroes in the West Indies is truly deplorable, and merits the attention of the Statesman, the Planter, and Physician. It may not be in our power to prevent the spreading of this disorder amongst the Negroes, but humanity and sound policy call aloud on us to alleviate the sufferings and distresses of this class of mankind, when they are so unfortunate as to be infected with this cruel malady.

* This Thesis was prepared by Dr Wright for the use of a ward of his from the West Indies. It is now printed from the English draft, in Dr Wright's handwriting, in preference to the Latin version.

Before our commerce with the natives of Guinea, Europeans seem to have been unacquainted with this filthy disorder, and we can discover no traces of it in the writings of the ancients, sacred or profane; unless it be that which is mentioned as having afflicted Job.

Amongst the moderns few have treated of the yaws. The first author who wrote on this disorder in Britain treats of it anonymously*, in the Medical Essays of Edinburgh, Art. 76: after him M. Virgile, who practised as a surgeon several years in the Island of St Domingo. Dr Hillary, an eminent physician in Barbadoes, has given an account of the nature and treatment of this exotic disease. The next author in point of time, is also anonymous. His paper is entitled an Essay on the Management and Diseases of Negroes; and on the more common diseases in the West Indies, and the remedies which that country itself produces †. The author of this humane and benevolent essay was Dr James Grainger, physician in St Christophers. He treats of the yaws at page 55, and in this as well as other diseases, gives many excellent hints. The latest dissertation I know of on Frambœsia, is Dr Macpherson's Thesis published at Glasgow.

Born in an island where this disorder is exceedingly prevalent, and deeply interested for the honour and welfare of my native country, I have chosen this disorder as the subject of my Inaugural Dissertation, in hopes to throw some new light on the nature and treatment of the yaws, *and contribute my mite to the general stock.* The account given of this disease is in some measure consonant to that of the authors before mentioned. Where I happen to differ from them, it is for the sake of truth, and from my own observation amongst

* John Hume, M. D. formerly surgeon to the Naval Hospital in Jamaica, and late a Commissioner of Sick and Hurt, is the author.

† In 1802, I edited Dr Grainger's essay on West India diseases, and subjoined a few practical notes. W. W.

the Negroes in Jamaica. But I am chiefly indebted to a valuable friend, who for many years practised medicine in that Island with happy success, and who has kindly communicated his remarks to me made on this disorder.

Definition.—The late celebrated Dr CULLEN, in his excellent work, Synopsis Nosologiæ Methodicæ, confesses he never had an opportunity of seeing the yaws. His definition of it is of course taken from SAUVAGES, SAGAR, and the Medical Essays.

" Fungi, mori, vel rubi idæi fructus referentes, in variis cutis partibus enati."

Dr CULLEN places Frambœsia in Class iii. Cachexiæ, and order iii. Impetigines, next to Lepra. Whereas it ought to have been arranged under Exanthemata, next to Variola, because, like the small-pox, it has its accession, height and decline ; like the small-pox it is taken by inoculation, and, when a person once passes safely through the yaws, he cannot again be infected by any means whatsoever. This fact is so well established, that a Negro is valued one-third part more by his having formerly had the yaws.

History of the Yaws.—It was formerly mentioned that this disorder was originally brought from the Coast of Guinea to the West Indies, where it is so very prevalent, that few Negroes escape it one time or other in their lives, especially in childhood or youth. The reason of this is obvious : Negresses may have the yaws themselves, or others of their family may have it, and persons living under the same roof are more liable to catch the distemper than others ; as will be hereafter shewn.

It often happens, that the owner does not know of a Negro being infected, till the eruption of the yaws takes place ; at other times one may foretel that this disorder will happen, by examining the patient carefully for sores or scratches, which, from their surface, may easily be de-

termined. If with such suspicious appearance of sores, the Negro has frequented the company of the infected, and has for some weeks had pains in his joints and limbs, resembling rheumatism, the eruption of the yaws will sooner or later take place, according to the habit of body. In some cases the eruptive fever is pretty smart, but in others scarcely discernible, or at least so trifling as not to be taken into account.

The eruptions are at first about the size of a pin-head, and scarcely rise above the level of the skin, but they soon encrease and become protuberant like pimples. In some time after this the cuticle falls off, leaving the parts covered with white sordes or sloughs; under which are small red fungi, or excrescences growing out of the skin, and daily increasing to different sizes, some not larger than the smallest wood-strawberry, others as big as a mulberry. They appear indifferently on all parts of the body, but mostly on the face, the armpits, the groin, the private parts, and perinæum. The size of these fungi, as well as their number, depend on the state of the patient's health, and habit of body. A healthy strong person will have few, but of a large size; whilst those of a thin or reduced habit, will have a vast number of small eruptions, which scarcely exceed the size of millet. In healthy subjects the disorder will arrive at its height in a month's time; in those that are sickly, not sooner than three or four months. At length the yaws decline, a yellow scab is formed, which falls off in a week or two, and leaves the skin smooth, and in general without pits. One or two of these fungi, however, increase to a greater size; they continue some time after the others, and are called the *master yaw*, leaving a scar behind them.

In the mean time the patient loses neither his appetite, his flesh, nor his strength. He suffers no pain or uneasiness, except from the nastiness of the disease, and a little soreness when the excrescences are rubbed or pressed.

Dr Hillary and some others have alleged that where the yaws break out, the hair of that part turns white. But such authors have either been misinformed in this circumstance, or have confounded the yaws with the lepra, where actually the change of colour occurs.

This is a true account of the disorder when left to nature, and neither retarded nor forwarded by medicine or outward application to the part first infected. But if a yaw sore, for example, on the leg or foot, is treated as a common ulcer, or the person continues to work or stand as in health, this sore soon becomes an ill-disposed ulcer; the neighbouring parts are inflamed; the edges of the ulcer are ragged, and turn back like those of cancerous ulcers. The surface of the ulcer looks foul, with white small specks or sloughs. The flesh is corroded and discharged in large black clots, the discharge is ichorous, black, and extremely offensive, and the patient's strength is wasted and worn out with pain The eruption of the yaws is retarded, and when it appears is of long continuance; especially if mercurials have been given too early.

When the yaws are repelled (which has been heretofore practised on board of Guineamen), by various external applications, as blue vitriol and solutions of corrosive sublimate, the disorder, it is true, disappears for a short time, and the Negro is sold as sound, the purchaser is cheated, and the poor Negro runs the risk of his life. Abuses of such a flagitious kind merit the severest punishment that the law can inflict. This pernicious fraud is with difficulty perceivable by the purchaser; but it is of consequence he should detect it early, otherwise the constitution will infallibly be ruined. When there is a glossy smoothness of the skin in those parts where the yaws commonly break out, we may almost be certain that repellents have been used. The sooner, then, that the disease is again thrown on the surface, the better chance the Negro has to regain his health. This is best done by sulphur with diaphoretic drinks and theriaca; above all, by

strengthening diet. But should the yawy matter continue long in the habit, the worst consequences follow. The disorder recurs with redoubled violence. In some it breaks out into the extremities with the most obstinate, cancerous, and cadaverous ulcers. In others, the body swells, and becomes as it were one abscess. The whole adipose membrane is filled with pus, and the poor creature dies tabid.

The benign yaw, if properly managed, goes completely off in a few months; but if interrupted in its course, by medicine or otherwise, it occasions either foul and carious ulcers in different parts, erosions of the nose and palate, boneache, or distortions of the limbs, which are difficult of cure, and sometimes resist every application.

The yaws break out also in the soles of the feet and palms of the hands. As those parts in Negroes are callous from walking bare-footed, or from labour, the parts affected become swelled, inflamed, and painful, and unless skilfully treated continue troublesome for a number of years.

Nosologists have divided the yaws into two species, viz. the Guinea and American. This happens when the disorder has been seen in different circumstances. Such distinctions are no way different, and only serve to puzzle the practitioner.

There is a disorder in this country and in Ireland, called the Sivvens, which is a true species of Frambœsia, but the symptoms are not alike in all respects. The Sivvens is an Erse word for raspberry, because, in very advanced states of the disease, certain spongy excrescences break out in various parts. See an excellent account of this disease in Edinburgh Essays, Physical and Literary, vol. iii. p. 155.

As this disorder was first brought to the Highlands of Scotland by the Protector's soldiers, I beg leave to denominate it Frambæsia Cromwelliana.

This dissertation being an account of the African or Guinea yaws, I shall not enter minutely into the history of the Siv-

vens. It is sufficient to give the leading symptoms, so as to distinguish it from the African disorder.

Diagnosis.—The Sivvens at first seizes the throat and nose; the yaws never till after a length of time or improper treatment. The eruptions in sivvens are watery, of a dirty hue, and intolerant stench. Those of the yaws are small as a pin-head, hard, and with no particular odour. In sivvens, boils appear here and there, forming deep and ill-disposed ulcers. These do not happen in the yaws. In sivvens, itchy tetters break out, in form of ring-worms, and either occasion a deep ulcer, or a scabby large spot, with inflammation. The Guinea yaws have no such appearances. The sivvens rarely affect the bones; the yaws always, unless well managed. In the yaws, the excrescences succeed the pimples, as well on the face and body as in the axillæ and privities. In sivvens, the fungi appear in the groin and perinæum, in a very advanced state of the disorder. The sivvens is highly contagious. The yaws are contracted only by inoculation. The sivvens may be cured early by mercurials, but mercurials in yaws are pernicious. In constitutions otherwise healthy, the yaws will go off in time; but if speedy and effectual means are not used in the sivvens, the patient will infallibly be destroyed.

Several authors have spoken of the yaws and syphilis as different modifications of the same thing. Whoever compares the account we have given, will find them widely different. It is true that the yaws affect the bones, the nose, and the palate, like syphilis, and admit of similar cure; but in syphilis there are neither eruptions nor fungi, as in the yaws, except on the privities, and then only in form of warts. The yaws attacks the same person only once in his lifetime; and we all know that lues venerea may be and is contracted repeatedly.

Persons who have the yaws may contract gonorrhœa, and even lues venerea. The former may be cured independent of the yaws, but the latter cannot till the yaws are on the decline.

Prognosis.—When the yaws are on a person of sound constitution, and when that person is properly clothed, fed, and kept clean, there is but little danger. But where the patient has been debilitated by preceding diseases, or other causes, the event is very doubtful, and often fatal. This is particularly the case where the yaws have been repelled, or mercury given in the early stages of this disorder.

Remote Causes.—Having formerly mentioned, that the yaws, like small-pox, attacks a person only once in their lives, I proceed to the remote causes.

This disorder being so prevalent amongst the Negroes, many people have entertained an opinion that the seeds of the malady are lurking in their constitution, and break out at some period without any exciting cause. This opinion, however, has no foundation in truth, as will be proved hereafter. Nor is there any thing in the habits of Negroes that predisposes them more to receive the infection of the yaws than in the habit of Europeans.

It has been supposed that white people in the West Indies, and the Negro servants about their houses, are less susceptible of the yaws than field Negroes, who live more on vegetables, grain, and farinaceous roots. This notion is equally groundless: For, if such were exposed to the same causes, the same effect would as readily take place in the one as in the other.

Before we quit this part of the subject, I must contradict an assertion commonly made, and credited by many as an established fact, and that is, that the diet of the Negroes, being chiefly of vegetables and farinaceous roots, debilitates their bodies and thins their blood.

The Negroes in Jamaica use very few vegetables in their food, and these are of the nutritive and demulcent kind, viz. Hibiscus esculentus (okra), Arum esculentum (Indian kale), Cleome pentaphylla (cayo calaloo), and various species of Ama-

ranthus (caliloo). These vegetables are made into soups or broths, with the addition of fish, crabs, or pork, and seasoned with salt and capsicum. Instead of bread they have abundance of plantains (Musa sapientum), the roots of the Arum colocasia and sagittifolium (cocoes), the sweet and bitter cassada (Jatropha), several kinds of yams (Dioscorea), the sweet potatoes (Convolvulus battatas), &c.; besides many delicious fruits which they cultivate in their own gardens and provision-grounds. A simple diet of this kind makes them strong, active, and able to perform their work with ease in their native climate, whilst white people, and their pampered domestics, are unable to stand fatigue or labour in the heat of the sun.

The diseases of field Negroes, as fevers and pleurisies, are of the inflammatory kind, and they bear repeated bleedings. Those of white people mostly partake of the remitting fever, in which, if the lancet is at all used, it ought to be very sparingly. The blood drawn from a Negro is generally firm and often buffy; that from a white person, loose, discoloured, and watery.

Proximate or Exciting Causes.—Having spoken fully of what have been deemed the remote causes of the yaws, and refuted various vulgar errors, and having shewn that no predisposing causes can exist, either in the constitution, or from diet or climate, I proceed to the proximate or exciting causes of this disease.

1*st*, When the yaws are at the height, the fungi have white sloughs, and discharge a thin ichor; they are in this state most infectious.

2*dly*, Ulcers from the yaws are at all times foul and offensive, and it is by them that the contagion is commonly propagated.

We know nothing more of the nature of this contagion, than of that of the small-pox or measles. All we can say is,

that it is a poison of a peculiar kind, which, when once it gets into the habit, produces certain effects. Nor has it been well ascertained what length of time is requisite from the receiving the contagion to the appearance of the yaws. If any experiments have been made, the result has not come to my knowledge.

There is no other mode of communicating the yaws but by *inoculation*, or the application of the ichor from the sores of the infected to the wounds, ulcers, or excoriations of people otherwise in health. Some will resist the action of variolous contagion, even by repeated inoculation; but no habit, age, sex, or country, is proof against the contagion of the yaws once in his lifetime.

There are several ways by which the yaws may be contracted; 1*st*, By sleeping in the same bed, and the ichor from the yaws getting on wounds or scratches of the uninfected; 2*dly*, By handling the infected, and allowing the virus to touch scratches or excoriations; 3*dly*, Let us suppose (and in fact it often happens), that a Negro is admitted with a sore on his leg, into the hot-house or infirmary on an estate, for cure, and the state of the ulcer is not attended to, till some time afterwards it turns out to be the yaws. Other Negroes, with common sores, will often wash their sores in the same bowl or basin; and if so, they will assuredly receive the contagion; 4*thly*, But the most common way this infection is propagated, is by small flies, who, gorging themselves with the ichor of the infected, alight on the ulcers, &c. of those who never had the disease; and, however minute the quantity thus applied, it will as effectually occasion the disease, as if put on in abundance.

Ratio Symptomatum.—To account for the various phenomena in contagious diseases, and particularly those of the eruptive kind, seems difficult, and even impossible;

Those who have attempted it have failed of success, or at least their hypotheses are unsatisfactory. For my part I shall be very brief, as the nature of contagion will probably be ever hid from human sagacity.

The virus of the yaws does not seem to be of an active nature. The person who receives the infection perceives no alteration on the wound, ulcer, or excoriation, for some time, except that it does not heal, and keeps foul on the surface. In a few weeks the neighbouring parts are inflamed, the edges of the sore are ragged and painful; from this we conclude that the ichor secreted is now of an acrid sort, and that part of it is constantly absorbed, and passes through the lymphatics to the subclavian vein, and so is circulated with the blood.

In the system it occasions but little disturbance, as the infected perform all the functions of life as before. We suppose that much of the contagion is carried off by the emunctuaries, and particularly by perspiration.

The quantity and quality of the eruption seems to depend on the state of the patient's health, and the state of the skin. I suppose also, that part of the contagion, in passing through the skin, adheres, and, by irritation, produces pimples. This conjecture is probable; for a man in full health, and who perspires freely, will have the yaws large and few in number, whereas a person in ill health and poorly clad, will have a numerous crop of small ill-disposed yaws.

We do not pretend to account for the phenomena in other respects; as, why the matter of yaws occasions bone-ache, distortions of the limbs, and erosions of the palate, nose, &c. like syphilis.

We have seen, when the yaws are repelled, that the whole adipose membrane is filled with pus. The poison, in this case, seems to have the power of quickly assimilating the lymph to its own nature, and converting it to pus, without the process of suppuration and abscess.

The blood of persons with the yaws seems no way different from that of people in health ; and a person in the yaws is as subject to other diseases as if no such distemper was present.

Prophylaxis.—To avoid all intercourse or communication with those infected with the yaws, is the only way to prevent its spreading. White people are attentive in this respect, but it is generally out of their power to prevent sound Negroes from visiting and cohabiting with those in the yaws. Such Europeans as are owners or overseers of slaves, and who must often be in company with Negroes in the yaws, should be careful of having any sores or scratches uncovered, when they approach the infected. He ought frequently to examine the state of their health, and that they keep themselves clean, and properly clothed. He is the best planter who feeds and clothes his Negroes well, and keeps his people in good spirits and cheerful minds. If such people should be infected, the yaws will be of the mildest kind, and of short duration.

Ratio Medendi.—On every well regulated estate in Jamaica, a house, for the reception of Negroes in the yaws is built, in some cool and healthy situation, as in plantain walks, and near by a rivulet or pond of good water. The planter provides a careful and discreet matron, who has herself formerly gone safely through the disorder. He provides them with plenty of good food and raiment. He takes care to make them do some easy work, as weeding and cleaning their own provision-grounds, watching a cane-piece, or following sheep or cattle. This prevents them from indulging in sloth and indolence; it diverts their attention from brooding over the affliction they labour under; and is every way conducive to health. Lastly, He is careful that the Negroes keep their persons and apparel neat and clean.

Physicians or surgeons who are employed on estates are not understood to have the immediate charge of Negroes in the yaws, unless some other acute disease intervene, as fever, dysentery, pleurisy, &c. The risk such gentlemen run is very great; for, should a medical man contract this filthy disease, his fortune and future prospects are ruined. He must be secluded many months from society; and if he at last escapes with his life it is well. From hence we may see the reason that the yaws is so little understood, and often so ill treated. Lastly, We may more readily apologize for the defects in most authors, as they write from the report of others, not from their own observation.

On the coast of Guinea, the Negroes take no pains to avoid the yaws, they rather seem to invite it, by keeping the infected with the sound in the same family. On this account, most of the Guinea Negroes brought to the West Indies have had the disorder when children: and, surely it is the best time of life to have it, as the juices of children are more bland than those of adults, and their mothers can easier feed and keep them clean.

It is probable that the natives of Africa have a better way of treating the yaws than we have in the West Indies. We never see any new Negroes with distortions of the limbs, or other ill consequences of the yaws, imported, but perhaps this is owing to the merchants on the coast rejecting such, when offered for sale.

The indications of cure of the yaws are,

1*st*, To support the patient's strength.
2*dly*, To promote a discharge by the skin.
3*dly*, To correct the vitiated juices. And,
4*thly*, To repair the injuries done to the constitution.

First, To support the patient's strength, a generous diet of animal food, with a due proportion of wine, or diluted

spirits, good lodging, clean warm clothes and bedding, bathing and gentle exercise, are necessary.

Secondly, To promote the discharge of the morbific matter by perspiration, or upon the surface, this intention will be answered by what has been already pointed out, or by small quantities of Flor. sulphur., tea of contrayerva, decoction of China root, or sassafras.

Thirdly, The vitiated juices are best corrected by a continuance of the diet recommended, and by decoctions of sarsaparilla, contrayerva root, sassafras, &c. Towards the decline, if the disease does not go off kindly, mild mercurials may then, and not till then, be given, with safety and advantage. They are best administered in small quantities, so as to act as alteratives, and not to occasion a ptyalism. If to these, a decoction of the woods, and sarsaparilla in powder, is added, the cure will be more certain.

Fourthly, To repair the injury done to the constitution by the disease itself, or by improper management in the beginning. Ulcers from the yaws do not agree with unctuous dressings, nor with warm fomentations. Washing them with cold water, and dressing them with vegetables, have a good effect. If they are small, it will be sufficient to cover them with a leaf of the *Cissus Cicyoides* or snake wyth, commonly called the yaws bush, or with a leaf of the *Jatropha Curcas* or English physic nut. If the ulcers are large, a poultice of these leaves, beaten and mixed with a little sugar, or with the pulp of roasted Seville oranges and sugar, are excellent antiseptics.

Erosions of the nose and palate, carious ulcers, bone-aches, &c. are produced by a long continued use of mercurial alteratives and decoction of woods. The mischief done by the too early use of mercury, must be remedied by diet, and by a plentiful use of sarsaparilla, both in decoction and in powder.

Before we quit this subject, another curious circumstance must be stated, viz.

Persons in the yaws are liable to other eruptive diseases, as measles and small-pox. The latter may be communicated by inoculation. This is best done after the yaws are on the decline, and it has a very happy effect, by superseding the yaws, and carrying them completely off. Or, should any of the yaws return to the surface, they continue but for a short time.

REMARKS AND OBSERVATIONS

ON

FEBRILE AND SPASMODIC DISEASES;

WITH CASES.

[Communicated to JAMES CURRIE, M. D. Liverpool.]

THE exacerbations of most fevers, so far as I have seen, happen in the afternoon from three to seven o'clock. Some authors of credit (Dr JAMES LIND of Windsor, and Dr FRANCIS BALFOUR) assert, that the moon, at full and change, is productive of changes in the fevers of Bengal; and that returns of intermittents, and paroxysms of fever, happen to sick and convalescent men about such phases of the moon. I have heard that practitioners have observed the same in the fevers in Demerara, Berbice, and Surinam, and in Dutch Guiana, where there are many canals, stagnant waters, and morass-lands, covered with woods, and on which the sun or wind have no influence. Never having practised much in marshy countries, I have no experience of such changes.

I entirely coincide with Dr CURRIE, at page 17, in the rules and cautions he has laid down as to the proper time and manner of applying cold water; and I wish they may be deeply impressed on the heart of every practitioner. For my part, I never succeeded better in the cure of fever, than by making use of the coldest water I could find, in the height

of the exacerbation. The hotter the skin felt, and the more the patient complained of heat, the greater benefit resulted from the sudden dashing of cold water. I likewise agree with Dr CURRIE, at page 34, that sea-water is preferable to fresh. It often, however, happens, that sea-water cannot be had; but water with sea-salt may be got in all situations, and I very often gave this a preference; as, in the act of solution, it was colder than the temperature of the sea in the West Indies.

The Savages in North America have long practised the cold bath for the cure of fever. A fire is made in their narrow huts, where the sick man is, and the external air shut out. When the Indian is heated to the greatest degree, he suddenly plunges into a cold stream of water, and immediately returns to his hut, where he falls into a profuse sweat.

Till of late, the internal use of cold water was strictly forbidden in ardent fevers; I early saw the benefit of it in gratifying the eager requests of the sick.

In 1772 I was sent for to see a person ill of fever, at a considerable distance from my house, in St James's, Jamaica. His name was William Jewel, aged about thirty years, and by trade a cooper. He had, by exposure to the heat of the sun, got a fever, with the usual symptoms of remittents, and had been attended by a person of no experience. Amongst other remedies, he had got several drastic vomits and purges. I found him in a hot room, with all the windows and doors shut, a load of bed-clothes, and warm drinks by him; his headach was great, his thirst intolerable, his skin burning hot, nor was it abated by the partial sweats from the warm drinks, load of bed-clothes, and surrounding curtains. My first intention was to cool the surrounding atmosphere; I drew aside the curtains, and gradually removed the blankets; the door was opened, and the Venetian lattice in the windows let down, so as to admit the external air freely, but not to blow in the direction of the bed. The poor man was greatly

relieved. "Will you," said he, "indulge me with a cup of cold water?" "Most certainly," I replied, and handed him a half-pint tumbler of it; he drank it hastily, with a thousand thanks, and was much refreshed. In ten minutes he requested another, which was granted. In a short while he exclaimed, "You have saved my life, I am cool and comfortable." The heat of the skin was now natural, a kindly perspiration came on, and my patient was inclined to sleep: next morning he was perfectly free of all complaints; and recovered without the use of any other medicine.

The effects of large draughts of cold water, and the sudden application of cold water to the surface, when well timed, were uniformly *to abate the heat of fevers immediately; to lower the action of the heart and arteries;* to bring on a *genial glow, and kindly perspiration.*

I have seen a few instances of the *anomalous fever, described* by Dr Currie at page 46, in this country. He has accurately described the symptoms and general appearances. I have marked it by a bright white appearance of the papillæ on the middle of the tongue, which in general had no slough or great dryness. This fever was obstinate, but at length yielded to calomel.

In other fevers, a violent headach resisted every other means, and was judged by some practitioners to be hydrocephalus. Calomel persevered in at length gave relief, without any sensible operation, except by the skin.

In regard to what Dr Currie says, page 68, as to the tepid bath or affusion, or sponging the body with warm vinegar and water, I have to remark, that the first was generally practised by me on sick men landed from crowded transports, when their skins felt sweaty, and below the natural temperature of heat; and sponging with warm vinegar and water was in daily use in the general hospital, when men could not be lifted out of bed. At other times, flannel cloths, wrung

dry out of hot water, and applied of such a degree of heat as to be pleasing to the patient, afforded sensible relief.

Dr Currie, at page 161, says, "Medical science has not ascertained the various remote causes which may produce fever." To confine the remote causes of fever to human effluvia or marsh miasma, may strictly be true ashore in the West Indies; but it is well known, that a malignant fever may be contracted in dark and confined chambers, and any other ill-ventilated places, whether on shore or aboard a ship; and although the experiments of Dr Mitchell of New York are not conclusive, it is to be hoped that the air in dungeons, &c. will be minutely examined, and its effects on the human body soon ascertained by some able hand.

I coincide in what Dr Currie says on the treatment of the plague at page 186, and Appendix, page 54. We have the best grounded hopes that the cold affusion will prove successful in the plague, as well as in all cases of malignant fever; and this will be insured by careful and effectual friction with oil or other unctuous substances. Oily frictions were used by me on a small scale, and chiefly to prevent the inordinate waste by sweatings in fevers; as also in fluxes, where I suspected that there were constrictions of the extreme vessels and pores of the skin.

Dr Currie, at page 210, thinks the cold affusion improper in local inflammations. I never enter the house of the middling ranks, or of the poor, where I see small children, but it immediately occurs to me to caution the mother against burns and scalds; and if it should unfortunately happen that any of the children should be scalded, to keep pouring the coldest water on the scalded part, for half an hour at least, and then to lay a wet linen rag over the part, to be renewed often. By this means the blistering of the part is effectually prevented, and the beginning inflammations soon disappear.

Of Tetanus.—While I was last in Jamaica 1784, three more cases of tetanus occurred, and were cured by the cold affusion; see my paper on tetanus in the 6th volume of Lond. Med. Obs.

The first was a Negro child, whose parents were very young, and were belonging to myself. From the mother lying in at her own house, and kept too warm, the infant began to be disordered, about the seventh day from the birth. I caused the mother and child to be removed to the dwelling-house, and immediately gave the child a tea-spoonful of castor oil, and, so soon as possible, an injection with sea-salt. These had their due effect. On the following day the child could not suck, and it was frequently affected with spasms. The jaws at times were close locked, and the *trismus infantum* strongly marked. In the West Indies this disease is frequent, and always fatal to new born children. It rarely happens to infants after the ninth day.

I acquainted the mother that there were little hopes of saving her child, and delivered the like opinion to the midwife, a sensible woman of colour, then in the house. In this hopeless case, I proposed the cold affusion, stating, that the child, in the way it was, must soon die, and that, if my scheme failed, there was no other. With some difficulty I got the better of her prejudices; the child was stripped, but in the mean time had a strong fit on the midwife's lap. So soon as it was over, she gave it to me, and I plunged it suddenly in a small tub of cold well-water. Respiration was stopt for a minute, the child was as stiff as a board. The midwife said, "You have killed the child." I made her dry the skin with a cloth, and rub the body briskly with oil. It began to breathe, and the stiffness by degrees was got the better of. About an hour afterwards it was put to the breast, and sucked heartily. The spasms never returned, and the midwife took all the merit of the cure to herself. The child lived two years, and died of worm fever.

The second case happened in 1784. A young Negro woman, twenty years of age, was seized (July) with a pain in her jaws, and at times she could not open her mouth to take in any solid food. I found that two or three times a day she had spasms in her jaw and neck, but to no great height. She had taken a purge, and afterwards twenty drops of laudanum three times a day. Suspecting the locked jaw, I asked her if she had suffered any hurt; she said she had not, but that she had carried a heavy basket of her own provisions to market on a very hot day. Without loss of time I ordered the cold affusion, and repeated it three times a day. This had the desired effect, and in a week's time she was completely cured, and is now the mother of many children.

The third case was a chronic tetanus, and the only one I saw. A new Negro boy, about ten years of age, belonging to the late Dr Brown at Falmouth, Trelawny, Jamaica, was employed as a waiting-boy. He was observed to start frequently, and make faces as boys do sometimes by imitation. After some time the spasms increased, and in the fits his jaws were shut. In common his mouth was drawn backwards; he could not walk or stand up without the help of a stick, and looked very like an orang-outang. I chanced to be at my relation Dr Brown's house, and pronounced the case to be locked jaw. Two buckets of cold water were suddenly dashed on his naked body, when the fit was on him. He was instantly relieved. This was repeated in the evening. Next morning the boy was missing. He had walked down to the sea, and threw himself from the wharf into the water. He was a good swimmer, was called out, and rubbed dry with a cloth, and walked briskly home. He was permitted every day to plunge into the sea, morning and evening; and in five days was perfectly free of all complaints.

I subjoin a memorandum of a case of tetanus cured by me by the cold affusion many years ago. It was drawn up by

Mr Peter Reid, an ingenious student of medicine here, from the mouths of the boy's parents, who are near relations of mine; the boy is at present in the best health.

In August 1787, Boswell Douglas, a boy of two years of age, fell upon the corner of a chair, by which the back part of his head was slightly injured. The child, however, appeared to suffer no inconvenience from it the rest of that day, but romped about as usual. Next day, when he was raised from bed, he was observed to be affected with violent sickness and retching, which his mother attributing to some pudding, of which he had eaten rather heartily the preceding day, gave him a vomit, which did not operate, and the sickness continued unabated for the rest of that day. About two o'clock next morning, his father going to see how he was, found him, as he thought, apparently dead; his whole body was in a state of the most violent contraction, his hands clenched, his head twisted to one side, and his neck rigidly retracted; his visage pale, his eyes dead and fixed, and his jaws so completely locked that it was impossible to introduce any thing into his mouth; and, as his parents expressed themselves, his whole body so strongly stiffened, that, when they moved him, he appeared as if he had no joints. In this desperate condition, he continued for two or three hours, his parents struggling in vain to procure assistance, as it was the middle of the night, when a person present, who had been much benefited by Dr Wright, in different circumstances, requested that his advice might be obtained. He was accordingly sent for, and, when the Doctor arrived, the child still continued in the same hopeless state. He immediately ordered a pail of *cold water* to be procured. The parents at first opposed the use of it, thinking that it would accelerate the fate of their child. They were at last persuaded to allow it to be tried, by the Doctor assuring them that it was the only chance the boy had for life. The Doctor then dashed

cold water on him, and afterwards plunged him into the pail. The effect was instantaneous, and almost miraculous; the child immediately opened his eyes, the spasms relaxed, and he called for a drink. From that moment he continued rapidly to recover; the spasms now and then recurred, and were as often relieved by the application of cold water. He got likewise wine to drink, and some mixed with his food. In a few days he was restored to his ordinary health.

DR WRIGHT'S DIRECTIONS TO OFFICERS GOING TO THE WEST INDIES.

[From Sir JOHN SINCLAIR's Code of Health, Appendix, Page 7.]

1. TAKE your passage in a packet, a frigate of war, or in an armed ship with convoy, and let your berth or cabin be in a free and well ventilated part of the ship. Transports are often crowded with soldiers, and incumbered with women and children; and unless the most strict and rigorous observance of cleanliness is in the persons as individuals, and in the berths of the men between decks, the *ship* or *jail fever* will soon break out, first amongst the troops, then the seamen, and, lastly, among the officers themselves.

2. If you have not before made a voyage any where, it is probable you would get *sea-sick*, which, while it lasts, is very distressing. I advise you at all times to sit in good air, and to be much upon deck throughout the day, and frequently to bathe the face in a basin of cold salt water. After each fit of vomiting, take a small basin of tea, water-gruel, or broth. Take sparingly of solid animal food, and abstain from spirits or fermented liquors for some days.

3. Here it is proper to take notice, that salt beef and pork are drained of all their nutritive juices. Living on such food exhausts the power and action of the stomach, and no proper supply of chyle enters the circulation. This, with lying in confined parts of the ship, never fails to produce sea-scurvy, with all its direful consequences.

4. Costiveness must be prevented by attention to diet. Eat moderately of flesh meat, but with it plenty of vegetables. There is not a better nor more wholesome mess at sea than pease soup, when seasoned with onions or celery-seed; exercise upon deck is conducive to health in general; it strengthens the stomach and bowels; it promotes digestion, and enables every organ to perform its functions. Some mild laxative medicine may be taken now and then, as the aloetic pill of the shops.

5. While at sea, make a hearty breakfast of tea or coffee, with plenty of biscuit and butter. The same at five or six o'clock in the afternoon. Take nothing between breakfast and dinner, nor be prevailed on to partake of the *meridian bowl*. This palls the appetite, weakens the stomach, and occasions a confusion in the head.

6. Care must be taken that the live stock be regularly fed and kept clean, otherwise they will soon be in a diseased state, and die; or, if killed, not fit to be brought to the table.

7. Dinner, when on board of ship, or on shore, should consist of a due proportion of animal food and vegetables; no rich sauces, or highly seasoned food. Eat moderately, and always *rise from the table with an appetite.*

8. During dinner, take a glass of water, or good brisk small-beer. The absurd practice of drinking several glasses of wine, while eating, should be abolished: Three glasses of wine after dinner may be taken, or a draught of porter or ale; but a mixture of liquors never fails to disorder the stomach and head.

9. Supper. A slice of cold meat, and a draught of porter. Go to bed soon, and rise early. Wash your face and hands in cold salt water.

A person who observes temperance, sleeps sound, rises refreshed, and is fit for any exertions of body and mind throughout the day. But the intemperate and luxurious are soon fatigued and debilitated; they are unfit for labour or exer-

tion; they become peevish and fractious in their tempers; a burthen to themselves, and a curse to all around them.

10. On landing, keep out of the heat of the sun; or, when out of doors, wear an umbrella. For some time, walk at leisure, and use no violent exercise in the heat of the day. *When a man is fatigued, sickness is at hand.* In other words, he is liable to a remitting fever; to receive contagion from human subjects, or from marsh miasma of salt marshy grounds by the sea.

11. As forts and garrisons in the West Indies, are on the low lands by the sea, they are generally unhealthy. If you have a choice, take a house on a rising ground, remote from swamps, and well clothed with timber trees, and succulent plants.

12. Riding is a healthy exercise, especially before breakfast: and sea-bathing is salutary, but remember *never to bathe when you perspire, or when cold*; and you ought not stay above one minute in the water at a time.

13. If at any time you are caught in a shower, keep in motion until you get to your own house, or that of a friend. Then get a complete shift of clothes to hand; after stripping, let your skin be well wiped with a dry towel: I by no means approve of rubbing the body with rum, as by it the pores are constricted, and a fever may be the consequence. The best cordial, in this case, is a warm basin of tea, coffee, chocolate, or broth, according to the time of the day. As you value your life, abstain from warm toddy, punch, or negus, unless this last is very weak.

14. There are a number of excellent fruits in all the islands; take care they are full ripe; and eat a little of them at a time, in the morning or afternoon.

15. Strangers are much tormented with mosquitoes, but, after a while, pay no attention to them. Be sure to draw down the mosquito-net close all around, and brush well in-

side with a large towel, to kill such mosquitoes as may still be there.

16. Chigres—a species of flea that burrows into the feet and toes; at first they occasion an itching, and then a little red lump, which becomes painful. A Negro is the best hand to pick them out; and a little snuff may be put into the cavity.

17. In a well regulated regimental mess, no one sits long after dinner; his duty will not admit of it; he is either on guard, or at the evening parade. An officer need never want amusement or exercise; in his quarters he may have books, musical instruments, or employ himself in drawing; and if he has a turn for natural history, so much the better,—he will find ample subjects for his purpose; in all the islands the scenery is new and beautiful, often magnificent and grand *.

It may be proper to add two receipts, one for preserving cream for several weeks or months, and the other for making egg-tea, both of which may be useful in sea voyages.

Mode of preserving Cream for several weeks or months, particularly calculated for Sea Vogages.

Take 12 ounces of white sugar, and dissolve it in some ounces of water, over a moderate fire. After the sugar is dissolved, boil it for about two minutes in an earthen vessel; after which, add, immediately, 12 ounces of fresh cream, and mix the whole uniformly over the fire; then suffer it to cool, pour it into a quart bottle, and cork carefully. Keep it in a cool place, and it will continue fit for use for several weeks, or even months.

* Great colds succeeding great heats, are productive of diseases; even cold nights after hot days. Many of the acute diseases of Europeans in hot countries, are occasioned by their exposing themselves incautiously to the serene or nightly dew.—*Arbuthnot on Air.*

Mode of Making Egg Tea.

It is well known how difficult it is to procure cream, or even milk, at sea, for making tea; but eggs, which may be preserved in a fresh state, by being buttered, or put up in salt, form a most excellent substitute. The mode of using an egg is this. Put in the whole egg, yolk and all, *in a raw state*, into a bowl, and unite the whole thoroughly, by working it together with a table-spoon; then pour in the tea gradually from a tea-pot, constantly stirring the mixture, so as to make it one uniform and homogeneous mass. It is hardly possible to distinguish this mixture, when properly prepared, from tea and rich cream. It is a very nourishing substance also, and may, with that view, be recommended to invalids on shore. An egg thus prepared, may likewise answer for coffee.

INSTRUCTIONS

PREPARED BY DR WRIGHT,

FOR A PERSON ABOUT TO SAIL FOR THE EAST INDIES AND CHINA.

1. Mark the thermometer daily during the whole voyage, especially in passing and repassing the Line, for at least 15 degrees.

2. Preserve any birds that may be shot in the voyage, particularly any land-birds that may come on board.

3. Preserve flying-fish by drying; also the heads, jaws and teeth of any large fishes caught in the voyage.

4. Take up, by the bucket, any sea-weeds on the surface of the sea. Amongst these are often found cancers, asterias, shells, &c. which should be carefully preserved. Mark the latitude and longitude where found.

5. Mark the latitude where you first see the tropic bird, the albitross, the Cape petrel, and other birds which inhabit particular tracts of the ocean.

6. Preserve carefully in spirits, medusæ, cancers, or other sea animals, or animalculæ, that are luminous in the dark, and the latitudes where found.

7. Wherever the sea is discoloured, endeavour to ascertain the cause of it, by examining the water, and the animalculæ found in it.

8. Preserve whatever plants you find in fructification. The plants in most request are those of the class Cryptogamia, being also the easiest, viz. all the fern tribe, lichens, and mus-

ci, whether on the ground, trees, rocks, or stones, or in water. All kinds of submarine plants, or corallines, whether growing in shallow water beds, on rocks, or thrown ashore by the tide.

9. Omit no opportunity of preserving all birds, fishes, or singular quadrupeds that may come in your way.

10. Also the different serpents, lizards, or frogs; toads, which require to be put in spirits; a specimen of the Cobro de cappella, or hooded snake, wanted.

11. Provide yourself with fly-flappers, pins, and proper boxes or drawers, for putting up insects. Preserve, also, as many of the butterflies, moths, and libellulas, as you can, in books, which is the best way of preserving them.

12. Take care to get ashore at every place you touch at; collect shells, corals, corallines, sponges, sea-weeds, &c. Purchase, also, shells or corals from the natives.

FOSSILS.

13. Gather specimens of all remarkable stones, on the shore, and especially of all the fixed rocks.

14. Inquire what is to be sold in the lapidaries' shops in Canton or China, where you will find great varieties of chalcedonies, cornelians, mocho stones, &c.

15. Procure two specimens of tourmaline from Ceylon.

16. Procure at Canton any of the stones or earths used in the manufacture of porcelain.

ADDITIONS.

17. Procure at Canton a specimen or two of the *Phasianus Argus*, Lin. or Luen Pheasant.

18. Wherever you have access to springs, take the heat of them accurately, by the thermometer in the shade.

19. Purchase at Canton such drawings of plants as are done after nature.

20. Write as exact an account as you can of the monsoons, and of every thing respecting the productions of China.

21. Obtain good samples of native borax, saltpetre, camphor, or gum lac, or other articles of materia medica.

DIRECTIONS

REGARDING

TROOPS EMBARKED FOR FOREIGN SERVICE.

A TON and three quarters to each man is the least proportion which ought to be allowed for a voyage of a month; but if longer, and to a warm climate, two tons, or two tons and three-quarters, ought to be given.

The greatest care must be taken to keep every part of the ship sweet and clean below, by scraping, washing and sweeping the berths, as well as by ventilators.

The hammocks should be daily carried on deck in dry weather.

Fumigations should often be made with pitch, tar, &c.

The decks should be washed in the morning only.

The troops should be mustered on deck three or four times every day; and women and children should be kept on deck most part of the day, that the air may sweeten their berths below.

The men should walk much about; and amusements should be devised for them, to induce them to take exercise.

Diet.—Fresh meat should be allowed every day to troops on board of transports. Beef and pork, alternately, once or twice a week; other articles in greater proportion.

As the ships enter into a hot climate, the diet should be varied from animal to vegetable food, with subacid fruits.

Sobriety ought to be inforced by severe discipline.

Barracks serve many good purposes. The men can be more regularly messed, their diet and persons more easily inspected, and spiritous liquors more perfectly restrained. They ought to be built on rising grounds, at a distance from marshes. The ceilings should be lofty, and the rooms well ventilated.

Military Hospitals.—The director should be a physician, with power from the commander-in-chief to form a well-digested plan for its management, by a medical board, composed of a physician-general, surgeon-general, a principal surgeon, and purveyor.

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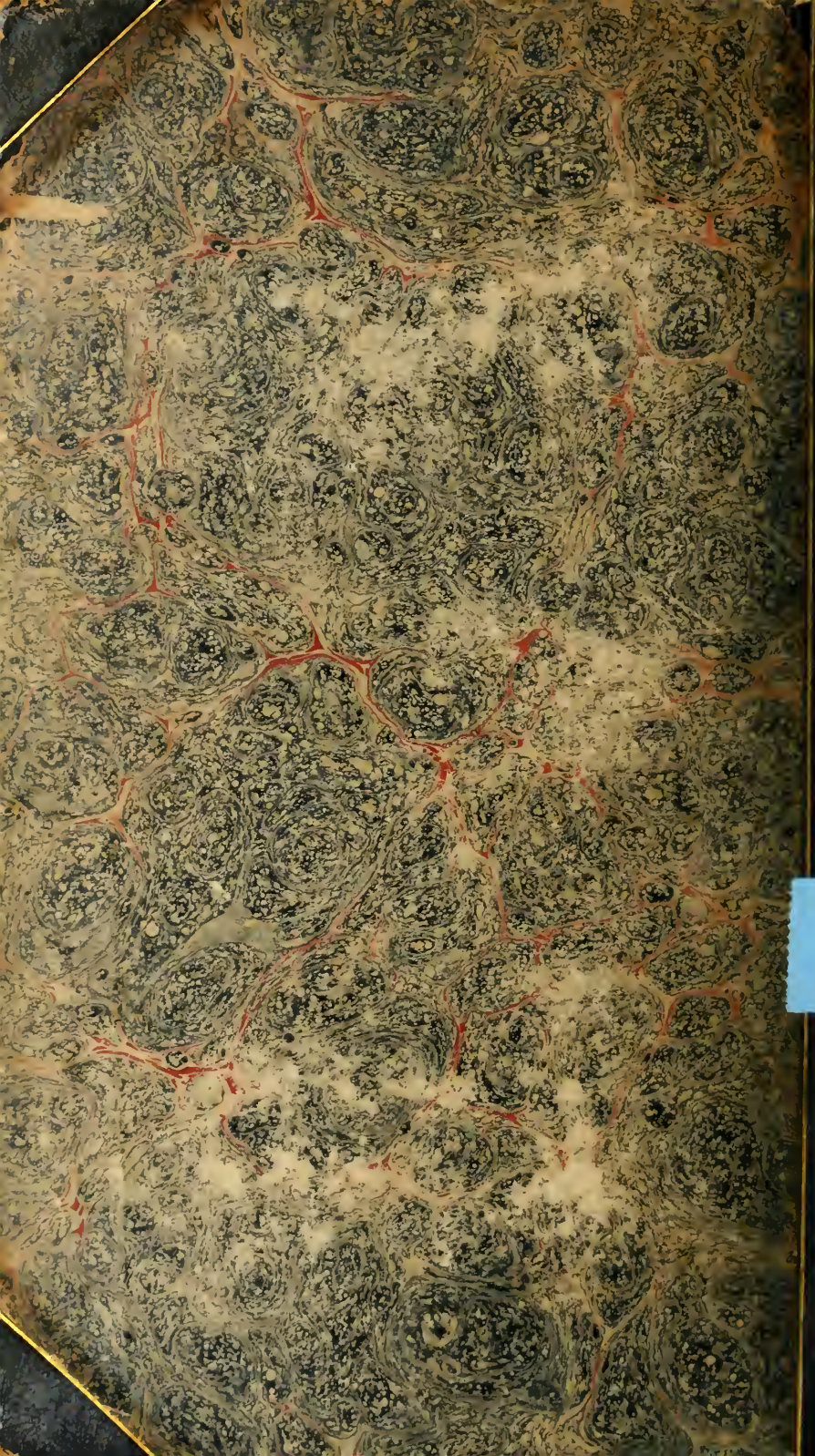
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